**** TSO FOREGROUND HARDCOPY ****
DSNAME=HRCSSES.DISLIB2 (NM)

DISCHARGER REPORT FOR: NEW MEXICO GENERATED ON: 8/ 6/88

REACH NO.	REACH NAME	POLL NO.	POLLUTANT NAME	NPDES NO.	LOAD (LBS/DAY)	DIS. CONC. (UG/L)	STREAM CRIT. (UG/L)	N S	IC	ON	QDIS CFS	QSTREAM CFS	NPDES NAME
11080001009	RATON CR	23	ARSENIC	NM0026522	0.00	4.6000	0.0175	N	3	N	0.0	1.7	RATON PUBLIC
11080001009	RATON CR	23	ARSENIC	NM0000205	0.00	4.6000	0.0175	N	3	Y	0.1	1.6	KAISER STEEL
11080001009	RATON CR	33	MERCURY	NM0026522	0.00	0.5000	0.0120	N	3	N	0.0	1.7	RATON PUBLIC
11080001009	RATON CR	33	MERCURY	NM0000205	0.00	0.5000	0.0120	N	3	Y	0.1	1.6	KAISER STEEL
11080001009	RATON CR	36	SILVER	NM0026522	0.00	4.1000	0.1200	N	3	N	0.0	1.7	RATON PUBLIC
11080001009	RATON CR	36	SILVER	NM0000205	0.00	4.1000	0.1200	N	3	Y	0.1	1.6	KAISER STEEL
11080001009	RATON CR	118	DIBENZAH-ANTHR	NM0026522	0.00	0.4000	0.0111	N	3	N	0.0	1.7	RATON PUBLIC
11080001009	RATON CR	118	DIBENZAH-ANTHR	NM0000205	0.00	0.4000	0.0111	N	3	Y	0.1	1.6	KAISER STEEL
11080001009	RATON CR	135	AMMONIA	NM0020273	83.54	10000.0000	1151.0000	N	16	Y	1.6	0.0	RATON, CITY
11080001009	RATON CR	142	MANGANESE	NM0026522	0.04	1123.0000	50.0000	N	3	N	0.0	1.7	RATON PUBLIC
11080001009	RATON CR	142	MANGANESE	NM0000205	0.76	1123.0000	50.0000	N	3	Y	0.1	1.6	KAISER STEEL
11080001009	RATON CR	161	CHLORINE (TRC)	NM0020273	4.18	500.0000	2.0000	S	16	Y	1.6	0.0	RATON, CITY
11080004009	MORA CR	135	AMMONIA	NM0024996	4.15	10000.0000	1151.0000	N	16	Y	0.1	0.0	MORA MUTUAL
11080004009	MORA CR	161	CHLORINE (TRC)	NM0024996	0.21	500.0000	2.0000	S	16	Y	0.1	0.0	MORA MUTUAL
11080006021	PAJARITO CR	135	AMMONIA	NM0020711	64.30	10000.0000	1151.0000	N	16	N	1.2	0.0	TUCUMCARI,CI
11080006021	PAJARITO CR	161	CHLORINE (TRC)	NM0020711	3.22	500.0000	2.0000	S	16	N	1.2	0.0	TUCUMCARI,CI
13020101007	RIO GRANDE	161	CHLORINE (TRC)	NM0023451	3.09	500.0000	2.0000	S	16	Y	1.1	120.5	ESPANOLA, CI
13020101007	RIO GRANDE	161	CHLORINE (TRC)	NM0028240	0.12	500.0000	2.0000	S	16	Y	0.0	120.4	VALLEY ESTAT
13020101007	RIO GRANDE	161	CHLORINE (TRC)	NM0023442	1.25	500.0000	2.0000	S	16	Y	0.5	119.6	ESPANOLA, CI
13020101010	RIO SANTA BARBARA	161	CHLORINE (TRC)	NM0024023	0.04	500.0000	2.0000	S	16	N	0.0	0.0	USDAFS-CARSO
13020101021	RIO FERNADO DE TAOS	135	AMMONIA	NM0024066	52.61	10000.0000	1151.0000	N	16	Y	1.0	0.0	TAOS, TOWN O
13020101021	RIO FERNADO DE TAOS	161	CHLORINE (TRC)	NM0024066	2.63	500.0000	2.0000	S	16	Y	1.0	0.0	TAOS, TOWN O
13020101025	RIO HONDO	161	CHLORINE (TRC)	NM0022101	0.12	500.0000	2.0000	S	16	Y	0.0	1.4	TWINING COOP
13020101027	RED R	23	ARSENIC	NM0022306	0.45	11.4000	0.0175	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	25	BERYLLIUM	NM0022306	0.05	1.3000	0.1170	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	30	COPPER	NM0022306	15.60	399.0000	12.0000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	32	LEAD	NM0022306	1.07	27.3000	3.2000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	33	MERCURY	NM0022306	0.46	11.8000	0.0120	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	36	SILVER	NM0022306	0.28	7.1000	0.1200	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	38	ZINC	NM0022306	19.94	510.0000	110.0000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101028	RED R	161	CHLORINE (TRC)	NM0024899	0.54	500.0000	2.0000	S	16	Y	0.2	3.7	RED RIVER, V
13020101032	CAUJE CANYON	135	AMMONIA	NM0020141	4.15	10000.0000	1151.0000	N	16	N	0.1	0.0	LOS ALAMOS C
13020101032	CAUJE CANYON	161	CHLORINE (TRC)	NM0020141	0.21	500.0000	2.0000	S	16	N	0.1	0.0	LOS ALAMOS C
13020102039	RIO CHAMA	135	AMMONIA	NM0027731	9.16	10000.0000	1151.0000	N	16	Y	0.2	0.4	CHAMA, CITY
13020102039	RIO CHAMA	161	CHLORINE (TRC)	NM0027731	0.46	500.0000	2.0000	S	16	Y	0.2	0.4	CHAMA, CITY
13020201004	ARROYO COYOTE	161	CHLORINE (TRC)	NM0020117	1.59	500.0000	2.0000	S	16	N	0.6	26.4	LOS ALAMOS C
13020201009	GALISTEO CR	23	ARSENIC	NM0028711	0.01	11.4000	0.0175	N	11	N	0.2	2.0	GOLD FLDS MI
13020201009	GALISTEO CR	30	COPPER	NM0028711	0.33	399.0000	12.0000	N	11	N	0.2	2.0	GOLD FLDS MI
13020201009	GALISTEO CR	33	MERCURY	NM0028711	0.01	11.8000	0.0120	N	11	N	0.2	2.0	GOLD FLDS MI
13020201009	GALISTEO CR	36	SILVER	NM0028711	0.01	7.1000	0.1200	N	11	N	0.2	2.0	GOLD FLDS MI
13020201011	SANTE FE R	135	AMMONIA	NM0022292	198.84	10000.0000	1151.0000	N	16	Y	3.7	5.4	SANTA FE, CI
13020201011	SANTE FE R	135	AMMONIA	NM0028614	1.67	10000.0000	1151.0000	N	16	N	0.0	4.5	VALLE VISTA
13020201011	SANTE FE R	135	AMMONIA	NM0022284	121.11	10000.0000	1151.0000	N	16	Y	2.2	1.0	SANTA FE, CI
13020201011	SANTE FE R	161	CHLORINE (TRC)	NM0022292	9.94	500.0000	2.0000	S	16	Y	3.7	5.4	SANTA FE, CI
13020201011	SANTE FE R	161	CHLORINE (TRC)	NM0028614	0.08	500.0000	2.0000	S	16	N	0.0	4.5	VALLE VISTA
13020201011	SANTE FE R	161	CHLORINE (TRC)	NM0022284	6.06	500.0000	2.0000	S	16	Y	2.2	1.0	SANTA FE, CI
13020201013	RIO GRANDE	161	CHLORINE (TRC)	NM0020125	2.21	500.0000	2.0000	S	16	N	0.8	78.5	LOS ALAMOS C
13020201013	RIO GRANDE	161	CHLORINE (TRC)	NM0020133	1.75	500.0000	2.0000	S	16	Y	0.7	98.7	LOS ALAMOS C
13020202010	JEMEZ R	161	CHLORINE (TRC)	NM0028011	0.12	500.0000	2.0000	S	16	Y	0.0	3.8	JEMEZ SPRING
13020203003	RIO GRANDE	135	AMMONIA	NM0020664	51.80	10000.0000	1151.0000	N	16	N	1.0	0.1	SOCORRO, CIT
13020203003	RIO GRANDE	161	CHLORINE (TRC)	NM0020664	2.59	500.0000	2.0000	S	16	N	1.0	0.1	SOCORRO, CIT
13020203014	RIO GRANDE	135	AMMONIA	NM0027782	2.48	10000.0000	1151.0000	N	16	Y	0.0	12.8	RIO GRANDE U

13020203014	RIO GRANDE	135	AMMONIA	NM0027863	0.05	10000.0000	1151.0000	N	16	Y	0.0	14.2	SANDIA PEAK
13020203014	RIO GRANDE	135	AMMONIA	NM0020303	39.24	10000.0000	1151.0000	N	16	Y	0.7	29.7	LOS LUNAS, V
13020203014	RIO GRANDE	161	CHLORINE (TRC)	NM0027782	0.12	500.0000	2.0000	S	16	Y	0.0	12.8	RIO GRANDE U
13020203014	RIO GRANDE	161	CHLORINE (TRC)	NM0027863	0.00	500.0000	2.0000	S	16	Y	0.0	14.2	SANDIA PEAK
13020203014	RIO GRANDE	161	CHLORINE (TRC)	NM0020303	1.96	500.0000	2.0000	S	16	Y	0.7	29.7	LOS LUNAS, V
13020203016	RIO GRANDE	33	MERCURY	NM0028126	0.00	11.8000	0.0120	N	11	N	0.1	2.4	HYDRO NUCLEA
13020203016	RIO GRANDE	135	AMMONIA	NM0022250	2773.69	10000.0000	1151.0000	N	16	Y	51.5	1.1	ALBUQUERQUE,
13020203016	RIO GRANDE	135	AMMONIA	NM0028452	0.05	10000.0000	1151.0000	N	16	N	0.0	8.3	CHARLES CARU
13020203016	RIO GRANDE	135	AMMONIA	NM0027987	0.59	10000.0000	1151.0000	N	16	N	0.0	11.0	ALBUQ. UTILS
13020203016	RIO GRANDE	135	AMMONIA	NM0023485	23.39	10000.0000	1151.0000	N	16	Y	0.4	12.4	BERNALILLO,
13020203016	RIO GRANDE	161	CHLORINE (TRC)	NM0022250	138.68	500.0000	2.0000	S	16	Y	51.5	1.1	ALBUQUERQUE,
13020203016	RIO GRANDE	161	CHLORINE (TRC)	NM0028452	0.00	500.0000	2.0000	S	16	N	0.0	8.3	CHARLES CARU
13020203016	RIO GRANDE	161	CHLORINE (TRC)	NM0027987	0.03	500.0000	2.0000	S	16	N	0.0	11.0	ALBUQ. UTILS
13020203016	RIO GRANDE	161	CHLORINE (TRC)	NM0023485	1.17	500.0000	2.0000	S	16	Y	0.4	12.4	BERNALILLO,
13020204008	RIO PUERCO	23	ARSENIC	NM0028401	0.69	11.4000	0.0175	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	25	BERYLLIUM	NM0028401	0.08	1.3000	0.1170	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	26	CADMIUM	NM0028401	0.21	3.5000	1.1000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	30	COPPER	NM0028401	24.00	399.0000	12.0000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	31	CYANIDE	NM0028401	1.07	17.8000	5.2000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	32	LEAD	NM0028401	1.64	27.3000	3.2000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	33	MERCURY	NM0028401	0.71	11.8000	0.0120	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	36	SILVER	NM0028401	0.43	7.1000	0.1200	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	37	THALLIUM	NM0028401	2.56	42.6000	40.0000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	38	ZINC	NM0028401	30.68	510.0000	110.0000	N	11	Y	11.2	0.1	CONTINENTAL
13020204008	RIO PUERCO	138	IRON	NM0028401	25.02	416.0000	300.0000	N	11	Y	11.2	0.1	CONTINENTAL
13020204015	RIO PUERCO	2	ALDRIN	NM0028738	0.00	0.0003	0.0001	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	3	ALPHA-BHC	NM0028738	0.00	0.1000	0.0310	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	4	BETA-BHC	NM0028738	0.00	0.1000	0.0547	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	8	DDD	NM0028738	0.00	0.0001	0.0000	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	9	DDE	NM0028738	0.00	0.0001	0.0000	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	11	DIELDRIN	NM0028738	0.00	0.0003	0.0001	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	23	ARSENIC	NM0028738	0.03	4.6000	0.0175	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	26	CADMIUM	NM0028738	0.01	1.7000	1.1000	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	32	LEAD	NM0028738	0.07	12.7000	3.2000	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	33	MERCURY	NM0028738	0.00	0.5000	0.0120	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	36	SILVER	NM0028738	0.02	4.1000	0.1200	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	118	DIBENZAH-ANTHR	NM0028738	0.00	0.4000	0.0111	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	138	IRON	NM0028738	6.27	1150.0000	300.0000	N	3	N	1.0	0.2	IBI COAL COM
13020204015	RIO PUERCO	142	MANGANESE	NM0028738	6.13	1123.0000	50.0000	N	3	N	1.0	0.2	IBI COAL COM
13020204018	*B	135	AMMONIA	NM0024848	11.70	10000.0000	1151.0000	N	16	Y	0.2	0.0	CUBA, VILLAG
13020204018	*B	161	CHLORINE (TRC)	NM0024848	0.58	500.0000	2.0000	S	16	Y	0.2	0.0	CUBA, VILLAG
13020204023	SALADO CR	23	ARSENIC	NM0028754	0.48	11.4000	0.0175	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	25	BERYLLIUM	NM0028754	0.05	1.3000	0.1170	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	26	CADMIUM	NM0028754	0.15	3.5000	1.1000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	30	COPPER	NM0028754	16.80	399.0000	12.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	31	CYANIDE	NM0028754	0.75	17.8000	5.2000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	32	LEAD	NM0028754	1.15	27.3000	3.2000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	33	MERCURY	NM0028754	0.50	11.8000	0.0120	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	36	SILVER	NM0028754	0.30	7.1000	0.1200	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	37	THALLIUM	NM0028754	1.79	42.6000	40.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	38	ZINC	NM0028754	21.47	510.0000	110.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	138	IRON	NM0028754	17.52	416.0000	300.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	23	ARSENIC	NM0028169	0.05	11.4000	0.0175	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	25	BERYLLIUM	NM0028169	0.01	1.3000	0.1170	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	26	CADMIUM	NM0028169	0.02	3.5000	1.1000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	30	COPPER	NM0028169	1.80	399.0000	12.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	31	CYANIDE	NM0028169	0.08	17.8000	5.2000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	32	LEAD	NM0028169	0.12	27.3000	3.2000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	33	MERCURY	NM0028169	0.05	11.8000	0.0120	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	36	SILVER	NM0028169	0.03	7.1000	0.1200	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	37	THALLIUM	NM0028169	0.19	42.6000	40.0000	N	11	Y	0.8	0.0	QUIVIRA MINI

13020204024	CANADA DEL OJO	38	ZINC	NM0028169	2.30	510.0000	110.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	138	IRON	NM0028169	1.88	416.0000	300.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020205010	VICENTE ARROYO	135	AMMONIA	NM0020974	0.81	10000.0000	1151.0000	N	16	N	0.0	0.0	USDIBIA-TORR
13020205010	VICENTE ARROYO	161	CHLORINE (TRC)	NM0020974	0.04	500.0000	2.0000	S	16	N	0.0	0.0	USDIBIA-TORR
13020205016	CANADA MARCELINA	23	ARSENIC	NM0028410	0.53	11.4000	0.0175	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	25	BERYLLIUM	NM0028410	0.06	1.3000	0.1170	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	26	CADMIUM	NM0028410	0.16	3.5000	1.1000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	30	COPPER	NM0028410	18.67	399.0000	12.0000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	31	CYANIDE	NM0028410	0.83	17.8000	5.2000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	32	LEAD	NM0028410	1.28	27.3000	3.2000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	33	MERCURY	NM0028410	0.55	11.8000	0.0120	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	36	SILVER	NM0028410	0.33	7.1000	0.1200	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	37	THALLIUM	NM0028410	1.99	42.6000	40.0000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	38	ZINC	NM0028410	23.86	510.0000	110.0000	N	11	N	8.7	0.0	CONTINENTAL
13020205016	CANADA MARCELINA	138	IRON	NM0028410	19.46	416.0000	300.0000	N	11	N	8.7	0.0	CONTINENTAL
13020207008	RIO PAGUATE	161	CHLORINE (TRC)	NM0024805	0.02	500.0000	2.0000	S	16	N	0.0	0.0	SEBOYETA MOW
13020207010	RIO SAN JOSE	161	CHLORINE (TRC)	NM0027391	0.04	500.0000	2.0000	S	16	N	0.0	21.5	ACOMA PUEBLO
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020389	0.00	11.4000	0.0175	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	23	ARSENIC	NM0026573	0.00	11.4000	0.0175	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	23	ARSENIC	NM0028100	0.74	11.4000	0.0175	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	23	ARSENIC	NM0028207	0.62	11.4000	0.0175	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020532	0.05	11.4000	0.0175	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020532	0.06	11.4000	0.0175	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020389	0.00	1.3000	0.1170	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0026573	0.00	1.3000	0.1170	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0028100	0.08	1.3000	0.1170	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0028207	0.07	1.3000	0.1170	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020532	0.01	1.3000	0.1170	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020532	0.01	1.3000	0.1170	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020389	0.00	3.5000	1.1000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	26	CADMIUM	NM0026573	0.00	3.5000	1.1000	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	26	CADMIUM	NM0028100	0.23	3.5000	1.1000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	26	CADMIUM	NM0028207	0.19	3.5000	1.1000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020532	0.02	3.5000	1.1000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020532	0.02	3.5000	1.1000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	30	COPPER	NM0020389	0.07	399.0000	12.0000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	30	COPPER	NM0026573	0.17	399.0000	12.0000	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	30	COPPER	NM0028100	26.00	399.0000	12.0000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	30	COPPER	NM0028207	21.67	399.0000	12.0000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	30	COPPER	NM0020532	1.88	399.0000	12.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	30	COPPER	NM0020532	2.24	399.0000	12.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020389	0.00	17.8000	5.2000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	31	CYANIDE	NM0026573	0.01	17.8000	5.2000	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	31	CYANIDE	NM0028100	1.16	17.8000	5.2000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	31	CYANIDE	NM0028207	0.97	17.8000	5.2000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020532	0.08	17.8000	5.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020532	0.10	17.8000	5.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	32	LEAD	NM0020389	0.00	27.3000	3.2000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	32	LEAD	NM0026573	0.01	27.3000	3.2000	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	32	LEAD	NM0028100	1.78	27.3000	3.2000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	32	LEAD	NM0028207	1.48	27.3000	3.2000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	32	LEAD	NM0020532	0.13	27.3000	3.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	32	LEAD	NM0020532	0.15	27.3000	3.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	33	MERCURY	NM0020389	0.00	11.8000	0.0120	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	33	MERCURY	NM0026573	0.00	11.8000	0.0120	N	11	N	0.1	25.1	RANCHERS EXP
13020207012	RIO SAN JOSE	33	MERCURY	NM0028100	0.77	11.8000	0.0120	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	33	MERCURY	NM0028207	0.64	11.8000	0.0120	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	33	MERCURY	NM0020532	0.06	11.8000	0.0120	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	33	MERCURY	NM0020532	0.07	11.8000	0.0120	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	36	SILVER	NM0020389	0.00	7.1000	0.1200	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	36	SILVER	NM0026573	0.00	7.1000	0.1200	N	11	N	0.1	25.1	RANCHERS EXP

13020207012	RIO SAN JOSE	36	SILVER	NM0028100	0.46	7.1000	0.1200	N	11	N	12.1	13.0 GULF MINERAL
13020207012	RIO SAN JOSE	36	SILVER	NM0028207	0.39	7.1000	0.1200	N	11	N	10.1	3.0 QUIVIRA MINI
13020207012	RIO SAN JOSE	36	SILVER	NM0020532	0.03	7.1000	0.1200	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	36	SILVER	NM0020532	0.04	7.1000	0.1200	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	38	ZINC	NM0020389	0.09	510.0000	110.0000	N	11	N	0.0	25.2 UNITED NUCLE
13020207012	RIO SAN JOSE	38	ZINC	NM0026573	0.21	510.0000	110.0000	N	11	N	0.1	25.1 RANCHERS EXP
13020207012	RIO SAN JOSE	38	ZINC	NM0028100	33.23	510.0000	110.0000	N	11	N	12.1	13.0 GULF MINERAL
13020207012	RIO SAN JOSE	38	ZINC	NM0028207	27.70	510.0000	110.0000	N	11	N	10.1	3.0 QUIVIRA MINI
13020207012	RIO SAN JOSE	38	ZINC	NM0020532	2.40	510.0000	110.0000	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	38	ZINC	NM0020532	2.86	510.0000	110.0000	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	138	IRON	NM0020389	0.07	416.0000	300.0000	N	11	N	0.0	25.2 UNITED NUCLE
13020207012	RIO SAN JOSE	138	IRON	NM0026573	0.17	416.0000	300.0000	N	11	N	0.1	25.1 RANCHERS EXP
13020207012	RIO SAN JOSE	138	IRON	NM0028100	27.11	416.0000	300.0000	N	11	N	12.1	13.0 GULF MINERAL
13020207012	RIO SAN JOSE	138	IRON	NM0028207	22.59	416.0000	300.0000	N	11	N	10.1	3.0 QUIVIRA MINI
13020207012	RIO SAN JOSE	138	IRON	NM0020532	1.96	416.0000	300.0000	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	138	IRON	NM0020532	2.34	416.0000	300.0000	N	11	N	1.0	1.1 KERR MCGEE C
13020207012	RIO SAN JOSE	161	CHLORINE (TRC)	NM0020737	7.35	500.0000	2.0000	S	16	Y	2.7	25.2 GRANTS,CITY
13020207013	RIO SAN JOSE	161	CHLORINE (TRC)	NM0020095	0.21	500.0000	2.0000	S	16	N	0.1	0.5 THOREAU, CIT
13030101010	RIO GRANDE	135	AMMONIA	NM0028291	6.25	10000.0000	1151.0000	N	16	Y	0.1	1.8 METRO BUILDE
13030101010	RIO GRANDE	135	AMMONIA	NM0020681	45.92	10000.0000	1151.0000	N	16	Y	0.9	1.4 TRUTH OR CON
13030101010	RIO GRANDE	161	CHLORINE (TRC)	NM0028291	0.31	500.0000	2.0000	S	16	Y	0.1	1.8 METRO BUILDE
13030101010	RIO GRANDE	161	CHLORINE (TRC)	NM0020681	2.30	500.0000	2.0000	S	16	Y	0.9	1.4 TRUTH OR CON
13030102002	RIO GRANDE	161	CHLORINE (TRC)	NM0028525	0.30	500.0000	2.0000	S	16	Y	0.1	3.2 SUNLAND PARK
13030102004	RIO GRANDE	161	CHLORINE (TRC)	NM0020010	0.12	500.0000	2.0000	S	16	Y	0.0	1.6 HATCH, VILLA
13030102011	RIO GRANDE	135	AMMONIA	NM0023311	367.60	10000.0000	1151.0000	N	16	Y	6.8	1.9 LAS CRUCES,
13030102011	RIO GRANDE	161	CHLORINE (TRC)	NM0023311	18.38	500.0000	2.0000	S	16	Y	6.8	1.9 LAS CRUCES,
13030202004	LAMPBRIGHT DRAW	23	ARSENIC	NM0020435	0.01	11.4000	0.0175	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	25	BERYLLIUM	NM0020435	0.00	1.3000	0.1170	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	26	CADMIUM	NM0020435	0.00	3.5000	1.1000	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	30	COPPER	NM0020435	0.33	399.0000	12.0000	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	31	CYANIDE	NM0020435	0.01	17.8000	5.2000	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	32	LEAD	NM0020435	0.02	27.3000	3.2000	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	33	MERCURY	NM0020435	0.01	11.8000	0.0120	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	36	SILVER	NM0020435	0.01	7.1000	0.1200	N	11	N	0.2	0.1 KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	38	ZINC	NM0020435	0.43	510.0000	110.0000	N	11	N	0.2	0.1 KENNECOTT CO
13030202006	*A	23	ARSENIC	NM0020460	0.07	11.4000	0.0175	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	25	BERYLLIUM	NM0020460	0.01	1.3000	0.1170	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	26	CADMIUM	NM0020460	0.02	3.5000	1.1000	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	30	COPPER	NM0020460	2.40	399.0000	12.0000	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	31	CYANIDE	NM0020460	0.11	17.8000	5.2000	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	32	LEAD	NM0020460	0.16	27.3000	3.2000	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	33	MERCURY	NM0020460	0.07	11.8000	0.0120	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	36	SILVER	NM0020460	0.04	7.1000	0.1200	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	38	ZINC	NM0020460	3.07	510.0000	110.0000	N	11	N	1.1	0.1 AMERICAN SME
13030202006	*A	135	AMMONIA	NM0020231	42.58	10000.0000	1151.0000	N	16	N	0.8	1.2 BAYARD, CITY
13030202006	*A	161	CHLORINE (TRC)	NM0020231	2.13	500.0000	2.0000	S	16	N	0.8	1.2 BAYARD, CITY
13030202008	RIO DE ARENAS	135	AMMONIA	NM0027375	1.67	10000.0000	1151.0000	N	16	N	0.0	0.1 RIO DE ARENA
13030202008	RIO DE ARENAS	161	CHLORINE (TRC)	NM0027375	0.08	500.0000	2.0000	S	16	N	0.0	0.1 RIO DE ARENA
13030202009	SAN VICENTE ARROYO	135	AMMONIA	NM0020109	96.05	10000.0000	1151.0000	N	16	N	1.8	0.1 SILVER CITY,
13030202009	SAN VICENTE ARROYO	161	CHLORINE (TRC)	NM0020109	4.80	500.0000	2.0000	S	16	N	1.8	0.1 SILVER CITY,
13060001013	PECOS R	161	CHLORINE (TRC)	NM0024988	1.25	500.0000	2.0000	S	16	Y	0.5	9.9 SANTA ROSA,
13060001013	PECOS R	161	CHLORINE (TRC)	NM0028134	0.12	500.0000	2.0000	S	16	Y	0.0	9.9 RIO PECOS VI
13060001014	GALLINAS R	135	AMMONIA	NM0028363	2.48	10000.0000	1151.0000	N	16	N	0.0	2.4 SAN MIGUEL C
13060001014	GALLINAS R	135	AMMONIA	NM0023337	83.54	10000.0000	1151.0000	N	16	N	1.6	0.8 LAS VEGAS, C
13060001014	GALLINAS R	135	AMMONIA	NM0023345	41.77	10000.0000	1151.0000	N	16	Y	0.8	0.0 LAS VEGAS, C
13060001014	GALLINAS R	161	CHLORINE (TRC)	NM0028363	0.12	500.0000	2.0000	S	16	N	0.0	2.4 SAN MIGUEL C
13060001014	GALLINAS R	161	CHLORINE (TRC)	NM0023337	4.18	500.0000	2.0000	S	16	N	1.6	0.8 LAS VEGAS, C
13060001014	GALLINAS R	161	CHLORINE (TRC)	NM0023345	2.09	500.0000	2.0000	S	16	Y	0.8	0.0 LAS VEGAS, C
13060003010	PECOS R	135	AMMONIA	NM0023477	8.35	10000.0000	1151.0000	N	16	Y	0.2	0.2 FORT SUMNER,
13060003010	PECOS R	161	CHLORINE (TRC)	NM0023477	0.42	500.0000	2.0000	S	16	Y	0.2	0.2 FORT SUMNER,
13060007002	PECOS R	135	AMMONIA	NM0022268	58.48	10000.0000	1151.0000	N	16	Y	1.1	0.4 ARTESIA, CIT

13060007002	PECOS R	161	CHLORINE (TRC)	NM0022268	2.92	500.0000	2.0000	S	16	Y	1.1	0.4	ARTESIA, CIT
13060008007	RIO HONDO	135	AMMONIA	NM0020311	461.17	10000.0000	1151.0000	N	16	N	8.6	0.1	ROSWELL, CIT
13060008007	RIO HONDO	161	CHLORINE (TRC)	NM0020311	23.06	500.0000	2.0000	S	16	N	8.6	0.1	ROSWELL, CIT
13060008020	RIO RUIDOSO	135	AMMONIA	NM0027791	0.05	10000.0000	1151.0000	N	16	N	0.0	2.3	ALTO ALPS IN
13060008020	RIO RUIDOSO	135	AMMONIA	NM0020249	120.30	10000.0000	1151.0000	N	16	N	2.2	0.0	RUIDOSO, VIL
13060008020	RIO RUIDOSO	161	CHLORINE (TRC)	NM0027791	0.00	500.0000	2.0000	S	16	N	0.0	2.3	ALTO ALPS IN
13060008020	RIO RUIDOSO	161	CHLORINE (TRC)	NM0020249	6.02	500.0000	2.0000	S	16	N	2.2	0.0	RUIDOSO, VIL
13060010006	*A	135	AMMONIA	NM0028061	2.48	10000.0000	1151.0000	N	16	Y	0.0	0.2	CLOUD 9 LTD-
13060010006	*A	135	AMMONIA	NM0023370	9.16	10000.0000	1151.0000	N	16	Y	0.2	0.0	CLOUDCROFT,
13060010006	*A	161	CHLORINE (TRC)	NM0028061	0.12	500.0000	2.0000	S	16	Y	0.0	0.2	CLOUD 9 LTD-
13060010006	*A	161	CHLORINE (TRC)	NM0023370	0.46	500.0000	2.0000	S	16	Y	0.2	0.0	CLOUDCROFT,
13060011003	PECOS R	135	AMMONIA	NM0020656	6.68	10000.0000	1151.0000	N	16	N	0.1	2.1	LOVING, VILL
13060011003	PECOS R	161	CHLORINE (TRC)	NM0020656	0.33	500.0000	2.0000	S	16	N	0.1	2.1	LOVING, VILL
13060011004	PECOS R	135	AMMONIA	NM0026395	163.75	10000.0000	1151.0000	N	16	Y	3.0	1.0	CARLSBAD, CI
13060011004	PECOS R	161	CHLORINE (TRC)	NM0026395	8.19	500.0000	2.0000	S	16	Y	3.0	1.0	CARLSBAD, CI
14080101005	SAN JUAN R	161	CHLORINE (TRC)	NM0020770	3.76	500.0000	2.0000	S	16	N	1.4	52.6	BLOOMFIELD,
14080104001	ANIMAS R	161	CHLORINE (TRC)	NM0020168	1.67	500.0000	2.0000	S	16	Y	0.6	31.2	AZTEC CITY O
14080105011	SAN JUAN R	161	CHLORINE (TRC)	NM0020621	2.09	500.0000	2.0000	S	16	Y	0.8	64.3	INDIAN LAND-
14080105016	SAN JUAN R	23	ARSENIC	NM0028193	0.08	4.6000	0.0175	N	3	Y	3.3	92.5	UTAH INTERNA
14080105016	SAN JUAN R	33	MERCURY	NM0028193	0.01	0.5000	0.0120	N	3	Y	3.3	92.5	UTAH INTERNA
14080105016	SAN JUAN R	36	SILVER	NM0028193	0.07	4.1000	0.1200	N	3	Y	3.3	92.5	UTAH INTERNA
14080105016	SAN JUAN R	118	DIBENZAH-ANTHR	NM0028193	0.01	0.4000	0.0111	N	3	Y	3.3	92.5	UTAH INTERNA
14080105019	SAN JUAN R	161	CHLORINE (TRC)	NM0020583	14.45	500.0000	2.0000	S	16	Y	5.4	112.8	FARMINGTON,
14080106004	CHACO R	2	ALDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	2	ALDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	2	ALDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	2	ALDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	3	ALPHA-BHC	NM0028193	0.00	0.1000	0.0310	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	3	ALPHA-BHC	NM0028193	0.00	0.1000	0.0310	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	3	ALPHA-BHC	NM0028193	0.00	0.1000	0.0310	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	3	ALPHA-BHC	NM0028193	0.00	0.1000	0.0310	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	4	BETA-BHC	NM0028193	0.00	0.1000	0.0547	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	4	BETA-BHC	NM0028193	0.00	0.1000	0.0547	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	4	BETA-BHC	NM0028193	0.00	0.1000	0.0547	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	4	BETA-BHC	NM0028193	0.00	0.1000	0.0547	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	8	DDD	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	8	DDD	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	8	DDD	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	8	DDD	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	9	DDE	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	9	DDE	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	9	DDE	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	9	DDE	NM0028193	0.00	0.0001	0.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	11	DIELDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	11	DIELDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	11	DIELDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	11	DIELDRIN	NM0028193	0.00	0.0003	0.0001	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	23	ARSENIC	NM0028193	0.08	4.6000	0.0175	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	23	ARSENIC	NM0028193	0.08	4.6000	0.0175	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	23	ARSENIC	NM0028193	0.08	4.6000	0.0175	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	23	ARSENIC	NM0028193	0.08	4.6000	0.0175	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	26	CADMIUM	NM0028193	0.03	1.7000	1.1000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	26	CADMIUM	NM0028193	0.03	1.7000	1.1000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	26	CADMIUM	NM0028193	0.03	1.7000	1.1000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	26	CADMIUM	NM0028193	0.03	1.7000	1.1000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	32	LEAD	NM0028193	0.23	12.7000	3.2000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	32	LEAD	NM0028193	0.23	12.7000	3.2000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	32	LEAD	NM0028193	0.23	12.7000	3.2000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	32	LEAD	NM0028193	0.23	12.7000	3.2000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	33	MERCURY	NM0028193	0.01	0.5000	0.0120	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	33	MERCURY	NM0028193	0.01	0.5000	0.0120	N	3	Y	3.3	92.5	UTAH INTERNA

14080106004	CHACO R	33	MERCURY	NM0028193	0.01	0.5000	0.0120	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	33	MERCURY	NM0028193	0.01	0.5000	0.0120	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	36	SILVER	NM0028193	0.07	4.1000	0.1200	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	36	SILVER	NM0028193	0.07	4.1000	0.1200	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	36	SILVER	NM0028193	0.07	4.1000	0.1200	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	36	SILVER	NM0028193	0.07	4.1000	0.1200	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	118	DIBENZAH-ANTHR	NM0028193	0.01	0.4000	0.0111	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	118	DIBENZAH-ANTHR	NM0028193	0.01	0.4000	0.0111	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	118	DIBENZAH-ANTHR	NM0028193	0.01	0.4000	0.0111	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	118	DIBENZAH-ANTHR	NM0028193	0.01	0.4000	0.0111	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	138	IRON	NM0028193	20.75	1150.0000	300.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	138	IRON	NM0028193	20.75	1150.0000	300.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	138	IRON	NM0028193	20.75	1150.0000	300.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	138	IRON	NM0028193	20.75	1150.0000	300.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	142	MANGANESE	NM0028193	20.27	1123.0000	50.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	142	MANGANESE	NM0028193	20.27	1123.0000	50.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	142	MANGANESE	NM0028193	20.27	1123.0000	50.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106004	CHACO R	142	MANGANESE	NM0028193	20.27	1123.0000	50.0000	N	3	Y	3.3	92.5	UTAH INTERNA
14080106007	SANOSTEE WASH	135	AMMONIA	NM0020818	4.15	10000.0000	1151.0000	N	16	N	0.1	0.1	USDIBIA-SANO
14080106007	SANOSTEE WASH	161	CHLORINE (TRC)	NM0020818	0.21	500.0000	2.0000	S	16	N	0.1	0.1	USDIBIA-SANO
14080106020	COYOTE WASH	135	AMMONIA	NM0020982	0.81	10000.0000	1151.0000	N	16	N	0.0	0.0	USDIBIA-STAN
14080106020	COYOTE WASH	161	CHLORINE (TRC)	NM0020982	0.04	500.0000	2.0000	S	16	N	0.0	0.0	USDIBIA-STAN
14080106026	KIM-ME-NI-OLI VALLEY	23	ARSENIC	NM0028274	0.19	11.4000	0.0175	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	23	ARSENIC	NM0028461	0.53	11.4000	0.0175	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	23	ARSENIC	NM0028622	0.00	11.4000	0.0175	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	23	ARSENIC	NM0028631	0.00	11.4000	0.0175	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	23	ARSENIC	NM0028649	1.03	11.4000	0.0175	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	25	BERYLLIUM	NM0028274	0.02	1.3000	0.1170	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	25	BERYLLIUM	NM0028461	0.06	1.3000	0.1170	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	25	BERYLLIUM	NM0028622	0.00	1.3000	0.1170	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	25	BERYLLIUM	NM0028631	0.C0	1.3000	0.1170	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	25	BERYLLIUM	NM0028649	0.12	1.3000	0.1170	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	26	CADMIUM	NM0028274	0.06	3.5000	1.1000	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	26	CADMIUM	NM0028461	0.16	3.5000	1.1000	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	26	CADMIUM	NM0028622	0.00	3.5000	1.1000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	26	CADMIUM	NM0028631	0.00	3.5000	1.1000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	26	CADMIUM	NM0028649	0.32	3.5000	1.1000	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	30	COPPER	NM0028274	6.73	399.0000	12.0000	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	30	COPPER	NM0028461	18.67	399.0000	12.0000	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	30	COPPER	NM0028622	0.06	399.0000	12.0000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	30	COPPER	NM0028631	0.03	399.0000	12.0000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	30	COPPER	NM0028649	36.00	399.0000	12.0000	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	31	CYANIDE	NM0028274	0.30	17.8000	5.2000	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	31	CYANIDE	NM0028461	0.83	17.8000	5.2000	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	31	CYANIDE	NM0028622	0.00	17.8000	5.2000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	31	CYANIDE	NM0028631	0.00	17.8000	5.2000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	31	CYANIDE	NM0028649	1.61	17.8000	5.2000	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	32	LEAD	NM0028274	0.46	27.3000	3.2000	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	32	LEAD	NM0028461	1.28	27.3000	3.2000	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	32	LEAD	NM0028622	0.00	27.3000	3.2000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	32	LEAD	NM0028631	0.00	27.3000	3.2000	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	32	LEAD	NM0028649	2.46	27.3000	3.2000	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	33	MERCURY	NM0028274	0.20	11.8000	0.0120	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	33	MERCURY	NM0028461	0.55	11.8000	0.0120	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	33	MERCURY	NM0028622	0.00	11.8000	0.0120	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	33	MERCURY	NM0028631	0.00	11.8000	0.0120	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	33	MERCURY	NM0028649	1.06	11.8000	0.0120	N	11	N	16.7	0.8	UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	36	SILVER	NM0028274	0.12	7.1000	0.1200	N	11	N	3.1	26.2	PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	36	SILVER	NM0028461	0.33	7.1000	0.1200	N	11	N	8.7	17.6	CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	36	SILVER	NM0028622	0.00	7.1000	0.1200	N	11	Y	0.0	17.5	PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	36	SILVER	NM0028631	0.00	7.1000	0.1200	N	11	Y	0.0	17.5	PHILLIPS URA

14080106026	KIM-ME-NI-OLI VALLEY	36	SILVER	NM0028649	0.64	7.1000	0.1200	N	11	N	16.7	0.8 UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	37	THALLIUM	NM0028274	0.72	42.6000	40.0000	N	11	N	3.1	26.2 PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	37	THALLIUM	NM0028461	1.99	42.6000	40.0000	N	11	N	8.7	17.6 CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	37	THALLIUM	NM0028622	0.01	42.6000	40.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	37	THALLIUM	NM0028631	0.00	42.6000	40.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	37	THALLIUM	NM0028649	3.84	42.6000	40.0000	N	11	N	16.7	0.8 UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	38	ZINC	NM0028274	8.61	510.0000	110.0000	N	11	N	3.1	26.2 PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	38	ZINC	NM0028461	23.86	510.0000	110.0000	N	11	N	8.7	17.6 CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	38	ZINC	NM0028622	0.07	510.0000	110.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	38	ZINC	NM0028631	0.04	510.0000	110.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	38	ZINC	NM0028649	46.02	510.0000	110.0000	N	11	N	16.7	0.8 UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	138	IRON	NM0028274	7.02	416.0000	300.0000	N	11	N	3.1	26.2 PHILLIPS PET
14080106026	KIM-ME-NI-OLI VALLEY	138	IRON	NM0028461	19.46	416.0000	300.0000	N	11	N	8.7	17.6 CONTINENTAL
14080106026	KIM-ME-NI-OLI VALLEY	138	IRON	NM0028622	0.06	416.0000	300.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	138	IRON	NM0028631	0.03	416.0000	300.0000	N	11	Y	0.0	17.5 PHILLIPS URA
14080106026	KIM-ME-NI-OLI VALLEY	138	IRON	NM0028649	37.54	416.0000	300.0000	N	11	N	16.7	0.8 UNITED NUCLE
14080106026	KIM-ME-NI-OLI VALLEY	161	CHLORINE (TRC)	NM0021016	0.04	500.0000	2.0000	S	16	N	0.0	29.4 USDIBIA-LAKE
14080106026	KIM-ME-NI-OLI VALLEY	161	CHLORINE (TRC)	NM0020630	2.09	500.0000	2.0000	S	16	N	0.8	0.0 INDIAN LAND-
14080106030	CHACO R	135	AMMONIA	NM0020991	1.67	10000.0000	1151.0000	N	16	N	0.0	0.0 USDIBIA-PUEB
14080106030	CHACO R	161	CHLORINE (TRC)	NM0020991	0.08	500.0000	2.0000	S	16	N	0.0	0.0 USDIBIA-PUEB
14080204019	COYOTE WASH	135	AMMONIA	NM0020869	0.81	10000.0000	1151.0000	N	16	N	0.0	0.0 USDIBIA-CRYS
14080204019	COYOTE WASH	161	CHLORINE (TRC)	NM0020869	0.04	500.0000	2.0000	S	16	N	0.0	0.0 USDIBIA-CRYS
15020004006	ZUNI R	135	AMMONIA	NM0023396	2.48	10000.0000	1151.0000	N	16	Y	0.0	0.2 RAMAH, CITY
15020004006	ZUNI R	161	CHLORINE (TRC)	NM0023396	0.12	500.0000	2.0000	S	16	Y	0.0	0.2 RAMAH, CITY
15020006002	WHITEWATER ARROYO	161	CHLORINE (TRC)	NM0020923	0.01	500.0000	2.0000	S	16	N	0.0	0.0 USDIBIA-JONE
15020006007	PUERCO R	23	ARSENIC	NM0020401	0.19	11.4000	0.0175	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	23	ARSENIC	NM0020524	0.21	11.4000	0.0175	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	23	ARSENIC	NM0027774	0.00	11.4000	0.0175	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	23	ARSENIC	NM0027979	0.27	11.4000	0.0175	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	23	ARSENIC	NM0028053	0.00	11.4000	0.0175	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	23	ARSENIC	NM0028096	0.41	11.4000	0.0175	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	23	ARSENIC	NM0028177	0.00	11.4000	0.0175	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	23	ARSENIC	NM0028550	0.12	11.4000	0.0175	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	25	BERYLLIUM	NM0020401	0.02	1.3000	0.1170	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	25	BERYLLIUM	NM0020524	0.02	1.3000	0.1170	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	25	BERYLLIUM	NM0027774	0.00	1.3000	0.1170	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	25	BERYLLIUM	NM0027979	0.03	1.3000	0.1170	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	25	BERYLLIUM	NM0028053	0.00	1.3000	0.1170	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	25	BERYLLIUM	NM0028096	0.05	1.3000	0.1170	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	25	BERYLLIUM	NM0028177	0.00	1.3000	0.1170	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	25	BERYLLIUM	NM0028550	0.01	1.3000	0.1170	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	26	CADMIUM	NM0020401	0.06	3.5000	1.1000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	26	CADMIUM	NM0020524	0.06	3.5000	1.1000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	26	CADMIUM	NM0027774	0.00	3.5000	1.1000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	26	CADMIUM	NM0027979	0.08	3.5000	1.1000	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	26	CADMIUM	NM0028053	0.00	3.5000	1.1000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	26	CADMIUM	NM0028096	0.13	3.5000	1.1000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	26	CADMIUM	NM0028177	0.00	3.5000	1.1000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	26	CADMIUM	NM0028550	0.04	3.5000	1.1000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	30	COPPER	NM0020401	6.73	399.0000	12.0000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	30	COPPER	NM0020524	7.20	399.0000	12.0000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	30	COPPER	NM0027774	0.07	399.0000	12.0000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	30	COPPER	NM0027979	9.60	399.0000	12.0000	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	30	COPPER	NM0028053	0.02	399.0000	12.0000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	30	COPPER	NM0028096	14.40	399.0000	12.0000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	30	COPPER	NM0028177	0.13	399.0000	12.0000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	30	COPPER	NM0028550	4.37	399.0000	12.0000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	31	CYANIDE	NM0020401	0.30	17.8000	5.2000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	31	CYANIDE	NM0020524	0.32	17.8000	5.2000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	31	CYANIDE	NM0027774	0.00	17.8000	5.2000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	31	CYANIDE	NM0027979	0.43	17.8000	5.2000	N	11	N	4.5	8.9 KERR-MCGEE C

15020006007	PUERCO R	31	CYANIDE	NM0028053	0.00	17.8000	5.2000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	31	CYANIDE	NM0028096	0.64	17.8000	5.2000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	31	CYANIDE	NM0028177	0.01	17.8000	5.2000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	31	CYANIDE	NM0028550	0.19	17.8000	5.2000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	32	LEAD	NM0020401	0.46	27.3000	3.2000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	32	LEAD	NM0020524	0.49	27.3000	3.2000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	32	LEAD	NM0027774	0.00	27.3000	3.2000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	32	LEAD	NM0027979	0.66	27.3000	3.2000	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	32	LEAD	NM0028053	0.00	27.3000	3.2000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	32	LEAD	NM0028096	0.99	27.3000	3.2000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	32	LEAD	NM0028177	0.01	27.3000	3.2000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	32	LEAD	NM0028550	0.30	27.3000	3.2000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	33	MERCURY	NM0020401	0.20	11.8000	0.0120	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	33	MERCURY	NM0020524	0.21	11.8000	0.0120	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	33	MERCURY	NM0027774	0.00	11.8000	0.0120	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	33	MERCURY	NM0027979	0.28	11.8000	0.0120	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	33	MERCURY	NM0028053	0.00	11.8000	0.0120	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	33	MERCURY	NM0028096	0.43	11.8000	0.0120	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	33	MERCURY	NM0028177	0.00	11.8000	0.0120	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	33	MERCURY	NM0028550	0.13	11.8000	0.0120	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	36	SILVER	NM0020401	0.12	7.1000	0.1200	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	36	SILVER	NM0020524	0.13	7.1000	0.1200	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	36	SILVER	NM0027774	0.00	7.1000	0.1200	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	36	SILVER	NM0027979	0.17	7.1000	0.1200	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	36	SILVER	NM0028053	0.00	7.1000	0.1200	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	36	SILVER	NM0028096	0.26	7.1000	0.1200	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	36	SILVER	NM0028177	0.00	7.1000	0.1200	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	36	SILVER	NM0028550	0.08	7.1000	0.1200	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	38	ZINC	NM0020401	8.61	510.0000	110.0000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	38	ZINC	NM0020524	9.20	510.0000	110.0000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	38	ZINC	NM0027774	0.09	510.0000	110.0000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	38	ZINC	NM0027979	12.27	510.0000	110.0000	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	38	ZINC	NM0028053	0.02	510.0000	110.0000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	38	ZINC	NM0028096	18.41	510.0000	110.0000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	38	ZINC	NM0028177	0.16	510.0000	110.0000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	38	ZINC	NM0028550	5.58	510.0000	110.0000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	135	AMMONIA	NM0028703	2.48	10000.0000	1151.0000	N	16	N	0.0	23.2 YAH-TA-HEY W
15020006007	PUERCO R	135	AMMONIA	NM0020672	161.21	10000.0000	1151.0000	N	16	N	3.0	13.7 GALLUP, CITY
15020006007	PUERCO R	135	AMMONIA	NM0020788	3.83	10000.0000	1151.0000	N	16	N	0.1	13.7 USA-FORT WIN
15020006007	PUERCO R	135	AMMONIA	NM0020958	12.50	10000.0000	1151.0000	N	16	Y	0.2	13.4 USDIBIA-WING
15020006007	PUERCO R	135	AMMONIA	NM0028029	6.25	10000.0000	1151.0000	N	16	N	0.1	8.8 GALLUP-GAMER
15020006007	PUERCO R	135	AMMONIA	NM0028045	0.81	10000.0000	1151.0000	N	16	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	138	IRON	NM0020401	7.02	416.0000	300.0000	N	11	N	3.1	20.1 UNITED NUCLE
15020006007	PUERCO R	138	IRON	NM0020524	7.51	416.0000	300.0000	N	11	Y	3.3	16.7 QUIVIRA MINE
15020006007	PUERCO R	138	IRON	NM0027774	0.07	416.0000	300.0000	N	11	N	0.0	13.4 INDIAN HILLS
15020006007	PUERCO R	138	IRON	NM0027979	10.01	416.0000	300.0000	N	11	N	4.5	8.9 KERR-MCGEE C
15020006007	PUERCO R	138	IRON	NM0028053	0.02	416.0000	300.0000	N	11	N	0.0	8.8 USDIBIA-NAVA
15020006007	PUERCO R	138	IRON	NM0028096	15.01	416.0000	300.0000	N	11	N	6.7	2.1 KERR-MCGEE C
15020006007	PUERCO R	138	IRON	NM0028177	0.13	416.0000	300.0000	N	11	N	0.1	2.0 MICHAEL P GR
15020006007	PUERCO R	138	IRON	NM0028550	4.55	416.0000	300.0000	N	11	N	2.0	0.0 UNITED NUCLE
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0028703	0.12	500.0000	2.0000	S	16	N	0.0	23.2 YAH-TA-HEY W
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0020672	8.06	500.0000	2.0000	S	16	N	3.0	13.7 GALLUP, CITY
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0020788	0.19	500.0000	2.0000	S	16	N	0.1	13.7 USA-FORT WIN
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0020958	0.63	500.0000	2.0000	S	16	Y	0.2	13.4 USDIBIA-WING
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0028029	0.31	500.0000	2.0000	S	16	N	0.1	8.8 GALLUP-GAMER
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0028045	0.04	500.0000	2.0000	S	16	N	0.0	8.8 USDIBIA-NAVA
15040004023	SAN FRANCISCO R	161	CHLORINE (TRC)	NM0024163	0.12	500.0000	2.0000	S	16	Y	0.0	0.0 RESERVE MUTU

**** TSO FOREGROUND HARDCOPY ****
DSNAME=HRCSSES.DISLIBP (NM)

DISCHARGER REPORT FOR: NM PCS ACTIVE GENERATED ON: 9/16/88

REACH NO.	REACH NAME	POLL NO.	POLLUTANT NAME	NPDES NO.	LOAD (LBS/DAY)	DIS. CONC. (UG/L)	STREAM CRIT. (UG/L)	N S	IC	ON	QDIS CFS	QSTREAM CFS	NPDES NAME
11080001009	RATON CR	135	AMMONIA	NM0020273	83.54	10000.0000	1151.0000	N	16	Y	1.6	0.0	RATON, CITY
11080001009	RATON CR	161	CHLORINE (TRC)	NM0020273	4.18	500.0000	2.0000	S	16	Y	1.6	0.0	RATON, CITY
11080006021	PAJARITO CR	135	AMMONIA	NM0020711	64.30	10000.0000	1151.0000	N	16	N	1.2	0.0	TUCUMCARI,CI
11080006021	PAJARITO CR	161	CHLORINE (TRC)	NM0020711	3.22	500.0000	2.0000	S	16	N	1.2	0.0	TUCUMCARI,CI
13020101021	RIO FERNADO DE TAOS	135	AMMONIA	NM0024066	52.61	10000.0000	1151.0000	N	16	Y	1.0	0.0	TAOS, TOWN O
13020101021	RIO FERNADO DE TAOS	161	CHLORINE (TRC)	NM0024066	2.63	500.0000	2.0000	S	16	Y	1.0	0.0	TAOS, TOWN O
13020101025	RIO HONDO	161	CHLORINE (TRC)	NM0022101	0.12	500.0000	2.0000	S	16	Y	0.0	1.4	TWINING COOP
13020101027	RED R	23	ARSENIC	NM0022306	0.45	11.4000	0.0175	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	25	BERYLLIUM	NM0022306	0.05	1.3000	0.1170	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	30	COPPER	NM0022306	15.60	399.0000	12.0000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	32	LEAD	NM0022306	1.07	27.3000	3.2000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	33	MERCURY	NM0022306	0.46	11.8000	0.0120	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	36	SILVER	NM0022306	0.28	7.1000	0.1200	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020101027	RED R	38	ZINC	NM0022306	19.94	510.0000	110.0000	N	11	Y	7.3	17.3	MOLYCORP-QUE
13020201011	SANTE FE R	135	AMMONIA	NM0022292	198.84	10000.0000	1151.0000	N	16	Y	3.7	5.4	SANTA FE, CI
13020201011	SANTE FE R	161	CHLORINE (TRC)	NM0022292	9.94	500.0000	2.0000	S	16	Y	3.7	5.4	SANTA FE, CI
13020203016	RIO GRANDE	135	AMMONIA	NM0022250	2773.69	10000.0000	1151.0000	N	16	Y	51.5	1.1	ALBUQUERQUE,
13020203016	RIO GRANDE	161	CHLORINE (TRC)	NM0022250	138.68	500.0000	2.0000	S	16	Y	51.5	1.1	ALBUQUERQUE,
13020204023	SALADO CR	23	ARSENIC	NM0028754	0.48	11.4000	0.0175	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	25	BERYLLIUM	NM0028754	0.05	1.3000	0.1170	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	26	CADMIUM	NM0028754	0.15	3.5000	1.1000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	30	COPPER	NM0028754	16.80	399.0000	12.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	31	CYANIDE	NM0028754	0.75	17.8000	5.2000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	32	LEAD	NM0028754	1.15	27.3000	3.2000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	33	MERCURY	NM0028754	0.50	11.8000	0.0120	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	36	SILVER	NM0028754	0.30	7.1000	0.1200	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	37	THALLIUM	NM0028754	1.79	42.6000	40.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	38	ZINC	NM0028754	21.47	510.0000	110.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204023	SALADO CR	138	IRON	NM0028754	17.52	416.0000	300.0000	N	11	N	7.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	23	ARSENIC	NM0028169	0.05	11.4000	0.0175	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	25	BERYLLIUM	NM0028169	0.01	1.3000	0.1170	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	26	CADMIUM	NM0028169	0.02	3.5000	1.1000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	30	COPPER	NM0028169	1.80	399.0000	12.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	31	CYANIDE	NM0028169	0.08	17.8000	5.2000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	32	LEAD	NM0028169	0.12	27.3000	3.2000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	33	MERCURY	NM0028169	0.05	11.8000	0.0120	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	36	SILVER	NM0028169	0.03	7.1000	0.1200	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	37	THALLIUM	NM0028169	0.19	42.6000	40.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	38	ZINC	NM0028169	2.30	510.0000	110.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020204024	CANADA DEL OJO	138	IRON	NM0028169	1.88	416.0000	300.0000	N	11	Y	0.8	0.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020389	0.00	11.4000	0.0175	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	23	ARSENIC	NM0028100	0.74	11.4000	0.0175	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	23	ARSENIC	NM0028207	0.62	11.4000	0.0175	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020532	0.05	11.4000	0.0175	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	23	ARSENIC	NM0020532	0.06	11.4000	0.0175	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020389	0.00	1.3000	0.1170	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0028100	0.08	1.3000	0.1170	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0028207	0.07	1.3000	0.1170	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020532	0.01	1.3000	0.1170	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	25	BERYLLIUM	NM0020532	0.01	1.3000	0.1170	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020389	0.00	3.5000	1.1000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	26	CADMIUM	NM0028100	0.23	3.5000	1.1000	N	11	N	12.1	13.0	GULF MINERAL

13020207012	RIO SAN JOSE	26	CADMIUM	NM0028207	0.19	3.5000	1.1000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020532	0.02	3.5000	1.1000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	26	CADMIUM	NM0020532	0.02	3.5000	1.1000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	30	COPPER	NM0020389	0.07	399.0000	12.0000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	30	COPPER	NM0028100	26.00	399.0000	12.0000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	30	COPPER	NM0028207	21.67	399.0000	12.0000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	30	COPPER	NM0020532	1.88	399.0000	12.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	30	COPPER	NM0020532	2.24	399.0000	12.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020389	0.00	17.8000	5.2000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	31	CYANIDE	NM0028100	1.16	17.8000	5.2000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	31	CYANIDE	NM0028207	0.97	17.8000	5.2000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020532	0.08	17.8000	5.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	31	CYANIDE	NM0020532	0.10	17.8000	5.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	32	LEAD	NM0020389	0.00	27.3000	3.2000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	32	LEAD	NM0028100	1.78	27.3000	3.2000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	32	LEAD	NM0028207	1.48	27.3000	3.2000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	32	LEAD	NM0020532	0.13	27.3000	3.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	32	LEAD	NM0020532	0.15	27.3000	3.2000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	33	MERCURY	NM0020389	0.00	11.8000	0.0120	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	33	MERCURY	NM0028100	0.77	11.8000	0.0120	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	33	MERCURY	NM0028207	0.64	11.8000	0.0120	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	33	MERCURY	NM0020532	0.06	11.8000	0.0120	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	33	MERCURY	NM0020532	0.07	11.8000	0.0120	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	36	SILVER	NM0020389	0.00	7.1000	0.1200	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	36	SILVER	NM0028100	0.46	7.1000	0.1200	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	36	SILVER	NM0028207	0.39	7.1000	0.1200	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	36	SILVER	NM0020532	0.03	7.1000	0.1200	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	36	SILVER	NM0020532	0.04	7.1000	0.1200	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	38	ZINC	NM0020389	0.09	510.0000	110.0000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	38	ZINC	NM0028100	33.23	510.0000	110.0000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	38	ZINC	NM0028207	27.70	510.0000	110.0000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	38	ZINC	NM0020532	2.40	510.0000	110.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	38	ZINC	NM0020532	2.86	510.0000	110.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	138	IRON	NM0020389	0.07	416.0000	300.0000	N	11	N	0.0	25.2	UNITED NUCLE
13020207012	RIO SAN JOSE	138	IRON	NM0028100	27.11	416.0000	300.0000	N	11	N	12.1	13.0	GULF MINERAL
13020207012	RIO SAN JOSE	138	IRON	NM0028207	22.59	416.0000	300.0000	N	11	N	10.1	3.0	QUIVIRA MINI
13020207012	RIO SAN JOSE	138	IRON	NM0020532	1.96	416.0000	300.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	138	IRON	NM0020532	2.34	416.0000	300.0000	N	11	N	1.0	1.1	KERR MCGEE C
13020207012	RIO SAN JOSE	161	CHLORINE (TRC)	NM0020737	7.35	500.0000	2.0000	S	16	Y	2.7	25.2	GRANTS,CITY
13030101010	RIO GRANDE	135	AMMONIA	NM0020681	45.92	10000.0000	1151.0000	N	16	Y	0.9	1.4	TRUTH OR CON
13030101010	RIO GRANDE	161	CHLORINE (TRC)	NM0020681	2.30	500.0000	2.0000	S	16	Y	0.9	1.4	TRUTH OR CON
13030102011	RIO GRANDE	135	AMMONIA	NM0023311	367.60	10000.0000	1151.0000	N	16	Y	6.8	1.9	LAS CRUCES,
13030102011	RIO GRANDE	161	CHLORINE (TRC)	NM0023311	18.38	500.0000	2.0000	S	16	Y	6.8	1.9	LAS CRUCES,
13030202004	LAMPBRIGHT DRAW	23	ARSENIC	NM0020435	0.01	11.4000	0.0175	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	25	BERYLLIUM	NM0020435	0.00	1.3000	0.1170	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	26	CADMIUM	NM0020435	0.00	3.5000	1.1000	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	30	COPPER	NM0020435	0.33	399.0000	12.0000	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	31	CYANIDE	NM0020435	0.01	17.8000	5.2000	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	32	LEAD	NM0020435	0.02	27.3000	3.2000	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	33	MERCURY	NM0020435	0.01	11.8000	0.0120	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	36	SILVER	NM0020435	0.01	7.1000	0.1200	N	11	N	0.2	0.1	KENNECOTT CO
13030202004	LAMPBRIGHT DRAW	38	ZINC	NM0020435	0.43	510.0000	110.0000	N	11	N	0.2	0.1	KENNECOTT CO
13030202009	SAN VICENTE ARROYO	135	AMMONIA	NM0020109	96.05	10000.0000	1151.0000	N	16	N	1.8	0.1	SILVER CITY,
13030202009	SAN VICENTE ARROYO	161	CHLORINE (TRC)	NM0020109	4.80	500.0000	2.0000	S	16	N	1.8	0.1	SILVER CITY,
13060007002	PECOS R	135	AMMONIA	NM0022268	58.48	10000.0000	1151.0000	N	16	Y	1.1	0.4	ARTESIA, CIT
13060007002	PECOS R	161	CHLORINE (TRC)	NM0022268	2.92	500.0000	2.0000	S	16	Y	1.1	0.4	ARTESIA, CIT
13060008007	RIO HONDO	135	AMMONIA	NM0020311	461.17	10000.0000	1151.0000	N	16	N	8.6	0.1	ROSWELL, CIT
13060008007	RIO HONDO	161	CHLORINE (TRC)	NM0020311	23.06	500.0000	2.0000	S	16	N	8.6	0.1	ROSWELL, CIT
13060011004	PECOS R	135	AMMONIA	NM0026395	163.75	10000.0000	1151.0000	N	16	Y	3.0	1.0	CARLSBAD, CI
13060011004	PECOS R	161	CHLORINE (TRC)	NM0026395	8.19	500.0000	2.0000	S	16	Y	3.0	1.0	CARLSBAD, CI
14080105011	SAN JUAN R	161	CHLORINE (TRC)	NM0020621	2.09	500.0000	2.0000	S	16	Y	0.8	64.3	INDIAN LAND-

14080105019	SAN JUAN R	161	CHLORINE (TRC)	NM0020583	14.45	500.0000	2.0000	S	16	Y	5.4	112.8	FARMINGTON,
15020006007	PUERCO R	23	ARSENIC	NM0020401	0.19	11.4000	0.0175	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	23	ARSENIC	NM0020524	0.21	11.4000	0.0175	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	23	ARSENIC	NM0028550	0.12	11.4000	0.0175	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	25	BERYLLIUM	NM0020401	0.02	1.3000	0.1170	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	25	BERYLLIUM	NM0020524	0.02	1.3000	0.1170	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	25	BERYLLIUM	NM0028550	0.01	1.3000	0.1170	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	26	CADMIUM	NM0020401	0.06	3.5000	1.1000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	26	CADMIUM	NM0020524	0.06	3.5000	1.1000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	26	CADMIUM	NM0028550	0.04	3.5000	1.1000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	30	COPPER	NM0020401	6.73	399.0000	12.0000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	30	COPPER	NM0020524	7.20	399.0000	12.0000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	30	COPPER	NM0028550	4.37	399.0000	12.0000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	31	CYANIDE	NM0020401	0.30	17.8000	5.2000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	31	CYANIDE	NM0020524	0.32	17.8000	5.2000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	31	CYANIDE	NM0028550	0.19	17.8000	5.2000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	32	LEAD	NM0020401	0.46	27.3000	3.2000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	32	LEAD	NM0020524	0.49	27.3000	3.2000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	32	LEAD	NM0028550	0.30	27.3000	3.2000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	33	MERCURY	NM0020401	0.20	11.8000	0.0120	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	33	MERCURY	NM0020524	0.21	11.8000	0.0120	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	33	MERCURY	NM0028550	0.13	11.8000	0.0120	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	36	SILVER	NM0020401	0.12	7.1000	0.1200	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	36	SILVER	NM0020524	0.13	7.1000	0.1200	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	36	SILVER	NM0028550	0.08	7.1000	0.1200	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	38	ZINC	NM0020401	8.61	510.0000	110.0000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	38	ZINC	NM0020524	9.20	510.0000	110.0000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	38	ZINC	NM0028550	5.58	510.0000	110.0000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	135	AMMONIA	NM0020672	161.21	10000.0000	1151.0000	N	16	N	3.0	13.7	GALLUP, CITY
15020006007	PUERCO R	138	IRON	NM0020401	7.02	416.0000	300.0000	N	11	N	3.1	20.1	UNITED NUCLE
15020006007	PUERCO R	138	IRON	NM0020524	7.51	416.0000	300.0000	N	11	Y	3.3	16.7	QUIVIRA MINE
15020006007	PUERCO R	138	IRON	NM0028550	4.55	416.0000	300.0000	N	11	N	2.0	0.0	UNITED NUCLE
15020006007	PUERCO R	161	CHLORINE (TRC)	NM0020672	8.06	500.0000	2.0000	S	16	N	3.0	13.7	GALLUP, CITY

extra
copies of
New Mexico 304(l)
info.

CANDIDATE MINI LIST

The mini list is to be comprised of waterbodies not expected to achieve State water quality standards revised pursuant to Section 303(c)(2)(B) for priority pollutants, due to point or nonpoint sources, after technology-based requirements have been met. This section of the 1987 Act appears to call for revision and adoption of water quality standards after the passage of the Act. It should be understood that the attached mini list was prepared based on current State standards, regardless of when they were adopted. The candidate mini list was developed from Tables 1a, 1c, and 2. For screening Categories 1-6, 8, and 12-16 (for the most part gathered directly from the State), waterbodies having asterisks for toxics (T) in the long list (Table 2) due to any source are included in the candidate mini list. Waterbodies in the long list due to only Category 7 are not included in the mini list because the Category 7 programs have no provision for comparison to State water quality standards. For Categories 9-11 (the dilution work), only those reaches having a "P" or "B" in columns 9a, 10a, or 11a in Table 1c are included (that is, only those reaches flagged because of calculated exceedances of State numerical standards for priority pollutants).

The candidate mini list should be reviewed carefully by the State because it may contain waterbodies that were flagged under Categories 1-6, 8, and 12-16 for toxics problems that do not involve violations of State numerical standards. Also, due to technical limitations of the dilution analysis (Categories 9-11), the list may lack some reaches having point source toxics problems or may include some reaches based on incorrect flow data.

304(l) (A) (i) Candidate Mini List

Waterbody ID	Reach	Waterbody Name	PS	NPS	UKS	Status
PR 2-209	13060008020	ALTO RESERVOIR			*	
SJR 2-401	14080106001	CHACO RIVER		*		
RG-120	13020101	CORDOVA CREEK		*		
RG 2-120	13020101035	COSTILLA CREEK			*	
RG 2-120	13020101035	COSTILLA CREEK			*	
RG 2-120	13020101035	COSTILLA CREEK			*	
RG 2-120	13020101009	EMBUDO CREEK			*	
PR 2-212	13060001014	GALLINAS RIVER			*	
RG 2-106	13020202010	JEMEZ RIVER		*	*	
	13030102	LA MESA DRAIN		*		
SJR 2-402	14080105026	LA PLATA RIVER			*	
SW CLOSED 2-804	13030202003	MIMBRES RIVER			*	
SW CLOSED 2-803	13030202003	MIMBRES RIVER			*	
GR 2-503	15040001020	MOGOLLON CREEK			*	
PR 2-206	13060007006	PECOS RIVER		*	*	
PR 2-206	13060007007	PECOS RIVER		*	*	
PR 2-206	13060007008	PECOS RIVER		*	*	
PR 2-202	13060011003	PECOS RIVER			*	
PR 2-201	13070001007	PECOS RIVER			*	
RG 2-120	13020101028	RED RIVER		*	*	
RG 2-119	13020101027	RED RIVER	*	*		
RG 2-105	13020203001	RIO GRANDE			*	
RG 2-105	13020203004	RIO GRANDE			*	
RG 2-111	13020201013	RIO GRANDE			*	
RG 2-120	13020101025	RIO HONDO			*	
RG 2-106	13020207	RIO MOQUINO		*		
RG 2-106	13020207008	RIO PAGUATE		*	*	
RG 2-106	13020204	RIO PUERCO			*	
PR 2-209	13060008020	RIO RUIDOSO		*	*	
PR 2-208	13060008020	RIO RUIDOSO			*	
RG 2-107	13020207012	RIO SAN JOSE	*	*		
CENT CLOS 2-801	13050003009	RIO TULAROSA			*	

KEY: PS = Point Source, NPS = Nonpoint Source, UKS = Unknown Source

304(l) (A) (i) Candidate Mini List

Waterbody ID	Reach	Waterbody Name	PS	NPS	UKS	Status
RG 2-106	13020202013	SAN ANTONIO CREEK		*		
RG 2-110	13020201011	SANTA FE RIVER		*	*	
SFR 2-603	15060101	SILVER CREEK		*		
CR-UNC	11080001006	UNA DE GATO CREEK			*	
CR 2-306	11080001011	VERMEJO RIVER			*	

KEY: PS = Point Source, NPS = Nonpoint Source, UKS = Unknown Source

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July 5, 1990

OAD

U.S. Environmental Protection Agency
Attention: Mr. Myron O. Knudson,
E.P. Director Water Management
Division (6W)
Region 6
1445 Ross Avenue, Suite 1200
Dallas, Texas 754202-2733

RECEIVED
JUL 09 1990
6W-EA

Re: NPDES Permit No. NM0020532

Dear Mr. Knudson:

Enclosed please find copy of Appeal taken by Quivira Mining Company from your June 2, 1990 decision promulgating an individual control strategy for Quivira's facility.

Sincerely yours,

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By John D. Robb
John D. Robb

JDR:clj
Enclosure

1 - Permit/CD
2 - AO & AO matl
3 - DMR's
4 - Vio. Summ. Log
5 - NOR
6 - Correspondence
7 - CMS
Date Filed
Clerk's Inits.

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WRITER'S DIRECT NUMBER

July 2, 1990

By FACSIMILE and FEDERAL EXPRESS

Honorable William D. Reilly
Administrator
U.S. Environmental Protection Agency
401 M. Street, S.W.
Washington, D. C. 20460

APPEAL

Quivira Mining does hereby appeal from the June 2, 1990 decision of the Region 6 administrator:

I. to list Quivira Mining Company and an unnamed arroyo/Arroyo del Puerto in the Section 304(L)(1)(B) and (C) lists of toxic pollutants; and

II. promulgating an individual control strategy by the proposed addition of a limit on selenium as a proposed modification of Quivira's NPDES permit.

Quivira appeals from that decision and objects to it on the grounds that the decision is arbitrary, unreasonable, illegal, contrary to the Clean Water Act and its amendments, to EPA's regulations and is otherwise discriminatory and unconstitutional. Among other reasons, it constitutes a deprivation of property of Quivira without due process of law.

With the exception of the constitutional grounds which were not specifically articulated therein, the reasons for Quivira's contentions that the actions of Region 6 are improper were set forth in some detail in the comments by Quivira to the Region's proposed actions which were previously filed herein, all of which comments are expressly adopted and reasserted herein. The decision by Region 6 is based upon conclusions which are unsupported by or contrary to both the facts and the law as described in Quivira's comments. Quivira asserts that the responses by Region 6 to its

comments are inadequate. For example, this is shown primarily by comparing Quivira's plenary comments (not just the summary thereof prepared by Region 6) with the Region's responses. In particular, however, Quivira emphasizes the inadequacy of the responses to Quivira's contentions:

I. that the background of the naturally occurring selenium in the water and other factors indicate that Quivira is not a substantial source or cause of the alleged conditions of the arroyo;

II. that Region 6 failed to follow the CWA and EPA regulations;

III. that merely agreeing to permit Quivira to assert its objections to the listings in the future does not answer its claims that the damage is being inflicted on Quivira now. By branding it as a substantial polluter, it is subjecting Quivira to enormous costs in resisting the proposed individual control strategy, and in trying to get itself removed from the list of detriments and damages which would not have occurred had EPA followed legal and proper procedures in taking the actions it did; and

IV. EPA has an inadequate basis for reaching the conclusion that a .05 mg\l standard for selenium is a fair one to apply to the standard to Quivira, particularly under the facts and circumstances of this case. EPA's reliance on an outdated 1972 standard is confirmed by its decision. The decision ignored evidence submitted by Quivira on the subject. Examples of the type of evidence also ignored by EPA which was readily available to it, are opinions of well known international experts such as Dr. Gerhard N. Schrauzer (and the studies upon which he relies) to the effect that selenium in water is generally not a problem for livestock, that the major problem for livestock is not an excess of selenium but an insufficiency of selenium because it is essential to nutrition, that it requires massive doses of selenium approximately 40 times that of the proposed standard in order to even approach toxicity and that, therefore, a reasonable standard for selenium in water is .25 mg\l. Also available to EPA, had it attempted to update its outmoded 1972 standards, would have been statements such as those of Dr. Frank Anderson, a well qualified doctor of veterinary medicine and livestock expert with special expertise in the geographical area of Quivira's discharge, affirming Dr. Schrauzer's conclusions. Copies of the statements of each of these experts is attached as an example of the fact that EPA should

have had knowledge and information in that both the proposed standard and its application in this case are unnecessary and unreasonable.

Respectfully submitted,

Yours very truly,

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By John D. Robb
John D. Robb
Attorney for Quivira Mining Company

JRD/mgw
Enclosures

MKA/mgw

Jim

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RECEIVED
MAY 25 1990
6W-EA

May 22, 1990

United States Environmental Protection Agency
Attention: Myron Knudson, P.E.
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Re: Section 304(l) State of New Mexico and Quivira Mining Co.

Dear Mr. Knudson:

Receipt is acknowledged of your letter of May 16, 1990, addressed to me as attorney for Quivira Mining Company. Thank you for your willingness to consider possible solutions. Unfortunately, we do not believe that the proposal addresses the primary problem for either Quivira or the State of New Mexico. Quivira's position is that it will be greatly injured by the very act alone of placing the arroyo and the company on the "(B") and "(C)" lists. We believe that Quivira was entitled to adequate notice and prior fair opportunity to establish that it did not belong on those lists before this drastic action was taken. We believe that it will be much more difficult as a practical matter for either Quivira or the arroyo to be removed from the lists once they have been listed by EPA. Even if Quivira is entitled to raise all of those issues in later NPDES permit proceedings, Quivira should not have to be faced with those proceedings at all. Quivira would be forced to spend much time and resources trying to address EPA's individual control strategies while simultaneously trying to get removed from the list. The accelerated lock step period would thus start running on June 4, 1990, before it has been properly and legally determined that Quivira and the arroyo should be on the lists at all.

The state would be similarly prejudiced regardless of your May 16, 1990, letter. It would be forced prematurely into an involved NPDES proceeding which it has not presently sought and which it long ago advised EPA should not be entertained at this time. Also, no after-the-fact opportunity by the state can replace the before-the-fact input and consultation role in developing the program prescribed by the Congress and by EPA in order to maintain the

JUN 13 1990

Jim

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JOHN M. BRANT
NEAL W. HARDIN
JOSEPH B. ROCHELLE
SCOTT D. GORDON
SUSAN L. SNYDER
JOEL K. JACOBSEN
ANGELA M. MARTINEZ
PATRICIA M. TAYLOR
OGDEN M. REID
BRIAN H. LEMATTA
MARK A. SMITH
R. NELSON FRANSE
THURMAN W. MOORE III
STEVEN G. KOPELMAN
PAUL R. KOLLER
JOY READ
JAMES P. BIEG
JAY B. SIMONSON
JAY D. HILL
CHARLES J. VIGIL
MARY P. KELEHER
JAMES E. BURKE

OF COUNSEL
DON L. DICKASON
WILLIAM A. SLOAN
JACKSON G. AKIN
RAY H. RODEY

PEARCE C. RODEY (1889-1958)

SANTA FE OFFICE:
MARCY PLAZA, SUITE 101
123 EAST MARCY STREET
P. O. BOX 1357
SANTA FE, NM 87504-1357
TELEPHONE 984-0100
AREA CODE 505
FACSIMILE 989-9542

WRITER'S DIRECT NUMBER

RECEIVED
MAY 25 1990
6W-EA

May 22, 1990

United States Environmental Protection Agency
Attention: Myron Knudson, P.E.
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

Re: Section 304(l) State of New Mexico and Quivira Mining Co.

Dear Mr. Knudson:

Receipt is acknowledged of your letter of May 16, 1990, addressed to me as attorney for Quivira Mining Company. Thank you for your willingness to consider possible solutions. Unfortunately, we do not believe that the proposal addresses the primary problem for either Quivira or the State of New Mexico. Quivira's position is that it will be greatly injured by the very act alone of placing the arroyo and the company on the "(B") and "(C)" lists. We believe that Quivira was entitled to adequate notice and prior fair opportunity to establish that it did not belong on those lists before this drastic action was taken. We believe that it will be much more difficult as a practical matter for either Quivira or the arroyo to be removed from the lists once they have been listed by EPA. Even if Quivira is entitled to raise all of those issues in later NPDES permit proceedings, Quivira should not have to be faced with those proceedings at all. Quivira would be forced to spend much time and resources trying to address EPA's individual control strategies while simultaneously trying to get removed from the list. The accelerated lock step period would thus start running on June 4, 1990, before it has been properly and legally determined that Quivira and the arroyo should be on the lists at all.

The state would be similarly prejudiced regardless of your May 16, 1990, letter. It would be forced prematurely into an involved NPDES proceeding which it has not presently sought and which it long ago advised EPA should not be entertained at this time. Also, no after-the-fact opportunity by the state can replace the before-the-fact input and consultation role in developing the program prescribed by the Congress and by EPA in order to maintain the

JUN 13 1990

proper federal - state balance and relationship in this important process. That delicate balance would be irretrievably upset by EPA'a proposal despite your May 16, 1990, letter.

We disagree with your interpretation of § 130.10(d)(10)(vi). We find nothing in that regulation which states that it is primarily for the benefit of parties desiring to petition for additions to the list rather than to allow sufficient comment time for alleged dischargers. The regulation does not refer to petitions for additions to the list. Dischargers are only persons definitely mentioned in that regulation as entitled to the notice and comment period. It states that: "The Regional Administrator shall also provide written notice to each discharger identified ... that EPA has listed the discharger under § 304(1)(1)(C)." The 120 day comment period thus is specifically intended to benefit alleged dischargers such as Quivira under the language of the regulation. Quivira and the state each received less than 30 instead of 120 days which Las Cruces received. Even if you were correct as to the primary purpose of the regulation, we don't see how EPA could avoid the clear wording of the regulation that alleged dischargers were at least one of the intended beneficiaries of the regulation.

We respectfully submit that the Dry Arroyo/Arroyo del Puerto and Quivira Mining Company should not be added to the lists since EPA has not complied with the above provisions. Nothing short of that will prevent both injustice and illegality affecting both Quivira and the state which would result from implementing EPA's proposals and from the improper procedure it has followed.

RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.

By John D. Robb

John D. Robb

JDR:erl

cc: Dennis Boyd
Pat Rankin

June 1, 1990

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 176 163 965)

Mr. Art Gebeau, General Manager
Quivira Mining Company
P.O. Box 216
Grants, New Mexico 87020

Re: NPDES Permit No. NM0020532

Dear Mr. Gebeau:

This letter is to inform you that, in accordance with 40 CFR 130.10(d), the U.S. Environmental Protection Agency, Region 6, has made its decision on the list of facilities submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is included on this list.

Please find enclosed the Individual Control Strategy (ICS) for your facility which Region 6 in cooperation with the State of New Mexico has developed in accordance with 40 CFR 122.44(e). The ICS for your facility is a draft NPDES permit which includes effluent limitations necessary to comply with the applicable state water quality standards. Region 6 intends to send the permit to public notice by November 1990 and will issue the final permit before February 4, 1991.

You and the general public will have the opportunity to comment upon the draft permit once it is sent to public notice. Issuance of the permit will constitute final Agency action regarding 304(l) for your facility.

Please also find enclosed a copy of the Region's decisions pursuant to Section 304(l) of the Clean Water Act on the list of waters and facilities, the response to comments received regarding the Region's proposed decisions, and an explanation of the 304(l) process.

If you have any questions about the 304(l) process, please contact Michael Morton of my staff on (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Environmental Improvement Division

bcc: Reading Files (6W-P, 6W-Q)
Eve Boss (6W-QS)
Mike Morton (6W-PT)
Jim Taft (EN-336)

6W-PT:PENDERGAST:tw:x7175:06/01/90:TW-Pend:let-d.ics

6W-PT	6W-P	6W-QS	6W-P	6C-W	6C-W
Pendergast	Ferguson	Bowen	Hoppers	Rankin	Collins

June 1, 1990

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 176 163 946)

Mr. Kenneth Needham
Director of Utilities
City of Las Cruces
Utilities Division
P.O. Drawer CLC
Las Cruces, New Mexico 88004

Re: NPDES Permit No. NM0023311

Dear Mr. Needham:

This letter is to inform you that, in accordance with 40 CFR 130.10(d), the U.S. Environmental Protection Agency, Region 6, has made its decision on the list of facilities submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is included on this list.

Please find enclosed the Individual Control Strategy (ICS) for your facility which Region 6 in cooperation with the State of New Mexico has developed in accordance with 40 CFR 123.46(e). The ICS for your facility is a draft NPDES permit which includes effluent limitations necessary to comply with the applicable state water quality standards. Region 6 intends to send the permit to public notice by November 1990 and will issue the final permit before February 4, 1991.

You and the general public will have the opportunity to comment upon the draft permit once it is sent to public notice. Issuance of the permit will constitute final Agency action regarding 304(l) for your facility.

Please also find enclosed a copy of the Region's decisions pursuant to Section 304(l) of the Clean Water Act on the list of waters and facilities, the response to comments received regarding the Region's proposed decisions, and an explanation of the 304(l) process.

If you have any questions about the 304(l) process, please contact Michael Morton of my staff on (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Environmental Improvement Division

bcc: Reading Files (6W-P, 6W-Q)
Eve Boss (6W-QS)
Mike Morton (6W-PT)
Jim Taft (EN-336)

6W-PT:PENDERGAST:tw:x7175:06/01/90:TW-Pend:let-d.ics

6W-PT	6W-P	6W-QS	6W-P	6C-W	6C-W

June 1, 1990

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 176 163 944)

Mr. J. W. Burgess, Mine Manager
Chevron Resources Co.
A Division of Chevron Ind., Inc.
P.O. Box 1150
Grants, New Mexico 87020

Re: NPDES Permit No. NM0028100

Dear Mr. Burgess:

This letter is to inform you that, in accordance with 40 CFR 130.10(d), the U.S. Environmental Protection Agency, Region 6, has made its decision on the list of facilities submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is included on this list.

Please find enclosed the Individual Control Strategy (ICS) for your facility which Region 6 in cooperation with the State of New Mexico has developed in accordance with 40 CFR 123.46(a). The ICS for your facility is a draft NPDES permit which includes effluent limitations necessary to comply with the applicable state water quality standards. Region 6 intends to send the permit to public notice by November 1990 and will issue the final permit before February 4, 1991.

You and the general public will have the opportunity to comment upon the draft permit once it is sent to public notice. Issuance of the permit will constitute final Agency action regarding 304(l) for your facility.

Please also find enclosed a copy of the Region's decisions pursuant to Section 304(l) of the Clean Water Act on the list of waters and facilities, the response to comments received regarding the Region's proposed decisions, and an explanation of the 304(l) process.

If you have any questions about the 304(l) process, please contact Michael Morton of my staff on (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Environmental Improvement Division

bcc: Reading Files (6W-P, 6W-Q)
Eve Boss (6W-QS)
Mike Morton (6W-PT)
Jim Taft (EN-336)

6W-PT:PENDERGAST:tw:x7175:06/01/90:TW-Pend:let-d.ics

MAY 16 1990

John D. Robb, Esquire
Rodey, Dickason, Sloan, Akin & Robb, P.A.
P. O. Box 1888
Albuquerque, New Mexico 87103

Dear Mr. Robb:

On April 14, 1990, EPA published a supplemental public notice proposing to add Quivira Mining to a list of dischargers for which it will issue individual control strategies (ICSs) under Section 304(1) of the Clean Water Act. In a May 7, 1990, meeting between representatives of Quivira and EPA, you contended 40 CFR 130.10 (d)(10)(vi) requires a 120 day comment period on such supplemental notices instead of the 30 day notice provided Quivira. You also argued 30 days is insufficient time for Quivira to prepare its comments, particularly in view of the somewhat unusual natures of the discharge and receiving stream at issue. This letter responds to your contention.

EPA established the 120 day period in 40 CFR 130.10(d)(10)(vi) primarily for the benefit of parties desiring to petition EPA for addition of dischargers to a proposed list, not to allow sufficient comment time for dischargers listed in the notice. Although EPA regulations do not address the issue, we therefore doubt the 120 day comment provision applies to a supplemental notice. The Agency sympathizes with your client's desire for additional time for comment preparation, but it cannot extend the comment period in this matter if it is to consider comments and make a decision on the proposed listing by June 4, 1990, as required by law.

We can, however, avoid any prejudice the relatively short comment period might otherwise cause your client. If EPA decides to issue an ICS for Quivira, that decision will not constitute judicially reviewable final agency action until Quivira's NPDES permit is amended to incorporate the ICS. Although copies of "draft permits" incorporating ICSs are issued in connection with listing decisions, the Agency provides a comment period on those draft permits in connection with the subsequent permit modification proceedings. See 40 CFR 124.10. Quivira may submit comments on the propriety of the ICS during that 30 day comment period and EPA will not challenge its right to raise issues which should have been raised in the current comment period on proposed listings. Our current projections indicate the comment period on a draft permit for Quivira would commence in November 1990. This should provide Quivira with more than enough time to prepare comments.

5/15

bcc: J. Pendergast, 6W-PT
E. Boss, 6W-QS
B. Goetz, 6AX
P. Rankin, 6C

Myron O. Knudson, P.E.
Director
Water Management Division

6C-W:PRankin:xt2129:5-14-90

CONCUR: Collins 6C-W 5-14-90; Alexander 6C 5/14/90; RHB 5/15 Boss 6W-QS EBB 5/15; Ferguson 6W-P 5/15/90; Pendergast 6W-PT 5/15/90 JBP

I hope this resolves your concerns. If you have any questions in this matter, please call Assistant Regional Counsel Pat Rankin at (214) 655-2129.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division

cc: Mr. Dennis Boyd, Secretary
New Mexico Health and Environment Department

APR 1 3 1990

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 057 307 352)

REPLY TO: 6W-PT

Mr. Art Gebeau, General Manager
Quivira Mining Company
P.O. Box 218
Grants, New Mexico 87020

Dear Mr. Gebeau:

This letter is to inform you that, in accordance with 40 CFR 130.10(d)(10), as promulgated on May 26, 1989, the U.S. Environmental Protection Agency, Region 6, has made an proposed decision to add to the list submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is now being considered for inclusion on this list.

Please find enclosed a copy of the Region's proposed decision and explanation of the 304(l) process. There will be a 30 day comment period on this proposed decision which begins on April 14, 1990, and extends to May 14, 1990. The Region will make a final decision on this list [304(l)(1)(C)] in accordance with 40 CFR 130.10(d)(11).

The Region is willing to meet with you in April to discuss this proposed action. If you have any questions about the 304(l) process or would like to schedule a meeting with the Region in Dallas, please contact Michael Morton of my staff at (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Health and Environmental Department

bcc: Reading File (6W-P)
Boss (6W-QS)
Morton (6W-PT)

6W-PT:PENDERGAST:tw:x7175:04/12/90:TW-pend:jim439

6W-PT Pendergast
6W-P Ferguson

APR 1 3 1990

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 057 307 351)

REPLY TO: 6W-PT

Mr. J. W. Burgess, Mine Manager
Chevron Resources Co.
A Division of Chevron Ind., Inc.
P.O. Box 1150
Grants, New Mexico 87020

Dear Mr. Burgess:

This letter is to inform you that, in accordance with 40 CFR 130.10(d)(10), as promulgated on May 26, 1989, the U.S. Environmental Protection Agency, Region 6, has made an proposed decision to add to the list submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is now being considered for inclusion on this list.

Please find enclosed a copy of the Region's proposed decision and explanation of the 304(l) process. There will be a 30 day comment period on this proposed decision which begins on April 14, 1990, and extends to May 14, 1990. The Region will make a final decision on this list [304(l)(1)(C)] in accordance with 40 CFR 130.10(d)(11).

The Region is willing to meet with you in April to discuss this proposed action. If you have any questions about the 304(l) process or would like to schedule a meeting with the Region in Dallas, please contact Michael Norton of my staff at (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Health and Environmental Department

bcc: Reading File (6W-P)
Boss (6W-QS)
Norton (6W-PT)

6W-PT:PENDERGAST:tw:x7175:04/12/90:TW-pend:jim439

6W-PT Pendergast
6W-P Ferguson

JUN 02 1989

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 105 323 335)

REPLY TO: 6W-PT

Mr. Kenneth Needham
Director of Utilities
City of Las Cruces
Utilities Division
P.O. Drawer CLC
Las Cruces, New Mexico 88004

Dear Mr. Needham:

This letter is to inform you that, in accordance with 40 CFR 130.10(d)(10), as promulgated on May 26, 1989, the U.S. Environmental Protection Agency, Region 6, has made an initial decision on the list submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is now being considered for inclusion on this list.

Please find enclosed a copy of the Region's initial decision and explanation of the 304(l) process. There will be a 120 day comment period on this initial decision which begins on June 4, 1989, and extends to October 4, 1989. The Region will make a final decision on this list [304(l)(1)(C)] in accordance with 40 CFR 130.10(d)(11).

If you have any questions about the 304(l) process, please contact Michael Morton of my staff at (214) 655-7175.

Sincerely yours,

Myron O. Knudson

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Environmental Improvement Division
bcc: Reading File (6W-P)
Champagne (6W-QS)
Morton (6W-PT)

6W-PT:PENDERGAST:tw:x7175:6/1/89:TW-pend:jim439

6W-PT Pendergast
6W-P Ferguson

JUN 0 2 1989

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 105 323 335)

REPLY TO: 6W-PT

Mr. Kenneth Needham
Director of Utilities
City of Las Cruces
Utilities Division
P.O. Drawer CLC
Las Cruces, New Mexico 88004

Dear Mr. Needham:

This letter is to inform you that, in accordance with 40 CFR 130.10(d)(10), as promulgated on May 26, 1989, the U.S. Environmental Protection Agency, Region 6, has made an initial decision on the list submitted by the State of New Mexico as required by section 304(l)(1)(C) of the Clean Water Act. Your facility is now being considered for inclusion on this list.

Please find enclosed a copy of the Region's initial decision and explanation of the 304(l) process. There will be a 120 day comment period on this initial decision which begins on June 4, 1989, and extends to October 4, 1989. The Region will make a final decision on this list [304(l)(1)(C)] in accordance with 40 CFR 130.10(d)(11).

If you have any questions about the 304(l) process, please contact Michael Morton of my staff at (214) 655-7175.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division (6W)

Enclosure

cc: New Mexico Environmental Improvement Division

bcc: Reading File (6W-P)
Champagne (6W-QS)
Morton (6W-PT)

6W-PT:PENDERGAST:tw:x7175:6/1/89:TW-pend:jim439

6W-PT 6W-P
Pendergast Ferguson

ACTIVITY MESSAGE

DATE: April 30, 1990

SUBJECT: 304(l) Meetings with (C) List Representatives

FROM: Eve Boss, 304(l) Coordinator

TO: See Below

Michael Morton has been contacted by several point source representatives to discuss the Region's additions to the proposed decisions on the 304(l) lists. I gather that most want to review the record and discuss the ICS. I will get a copy of the administrative record available for each meeting, but will not be attending all of the meetings. (Phil I hope you can sit in on most of the meetings to provide additional technical support to Michael.)

The list as it stands now:

Temple Inland	Wednesday, May 2 @ 10 am
Vista	Thursday, May 3 @ 10 am
Quivira	Monday, May 7 @ 1 pm
PPG	Wednesday, May 9 @ 9 am
Ethyl	Thursday, May 10 @ 2 pm

Addressees: Russell Bowen, 6W-QS
David Neleigh, 6W-QT
Phil Crocker, 6W-QT
Jim Pendergast, 6W-PT
Michael Morton, 6W-PT
Ellen Caldwell, 6W-PS
Pat Rankin, 6C-G

cc: Myron Knudson, 6W
Richard Hoppers, 6W-Q
Jack Ferguson, 6W-P

Quivira 5-7-90

1. Plant is on stand-by - 48 people maintained in hopes of mining again - pumping water out of mines to keep them viable. Uranium @ $8/~~pound~~? down from $40/~~pound~~?. Selenium requirement could close operation

2. Concerned with only 30 day notice vs 120 days given on original notice. Questioned fairness.

3. Grants Mineral belt is naturally high in Selenium. At rainfall events the area is probably high in Selenium. Therefore is Quivira a "Significant" source? EPA indicated that it was the only source at low flow - thus ~~Significant~~.

4. Concern for variance - wait till see if mining is economically viable in next few years. EPA indicated not aware of variance provisions - in a year of two state may have a lower (more stringent) selenium criteria in the WQS. Also ICS process allows for 3 year compliance date.

5. Not aware of technical solution - how to treat ? 1000 gpd to low enough level; seeking info, contacts Re: to N.C. - Duke Coal, Calif. - Irrig., Full Hunker

6. Discussed "final" agency action being the final permit since NM was not delegated. Pat Rankin to get back with Quivira on their ability to question listing during permit process.

7 Will check with State on WQS plans + potential actions by EPA - 303(c)(2)(B)

8. Will compile: St. WQ data, USGS data in area; treatment info, economics, "setting" studies (fate of selenium downstream), soils data.

9. Permit expires '93

5/7/90 Quivira

Adm Record Review

Ena Bass EPA

Toka Nabb Atty

Bill Ferdinand (OKC) Quivira

Marvin Freeman VP (OKC) ~

Hal Whitacre Operator QMC

Pat Rankin (214) 655-2129 EPA (6c-w)

Michael G. Morton EPA (6W-PT)

JOHN D. ROBB
RODEY, DICKASON, SLOAN, AKIN & ROBB, P.A.
COUNSELORS AND ATTORNEYS AT LAW

AREA CODE 505
TELEPHONE 765-5900

20 FIRST PLAZA, SUITE 700
POST OFFICE BOX 1888
ALBUQUERQUE, NEW MEXICO 87103

JAN 4, 89

Mr. Richard Mitzelfelt, Director
New Mexico Environmental Improvement Division
Harold Runnels Building
1190 St. Francis Drive
Santa Fe, New Mexico 87503

Dear Mr. Mitzelfelt:

I have signed the Technical Agreement for Implementation of Requirements under Section 304(l) of the Clean Water Act submitted with your letter dated November 23, 1988. A copy of the completed signature sheet is enclosed for your files. I am pleased to formalize the process and procedures which our agencies have been following since passage of the 1987 amendments to the Clean Water Act, and I am encouraged by the progress that NMEID has made toward implementing the requirements of Section 304(l).

We have completed our review of your preliminary 304(l) lists. A separate letter has been sent transmitting our comments. We look forward to working with your staff in revising these lists for final submittal by the statutory deadline of February 4, 1989.

We are also anxious to work with you toward identifying a list of waterbodies with suspected toxic problems and toward developing a "water quality assessment plan" which will describe how EID will make a determination as to whether or not a toxic problem exists in those waterbodies.

I appreciate the attention and cooperation you have devoted to our mutual programs to control water quality problems related to toxics. Do not hesitate to call on me whenever you need assistance.

Sincerely yours,

Myron O. Knudson, P.E.
Director
Water Management Division, 6W

Enclosure

cc: Kathy Sisneros, EID
David Tague, EID
Jim Piatt, EID

bcc: Larry Champagne

6W-QS:GMalott:5-7140:ch:12-10-88

GM-8641

6W-QS 6W-QS 6W-Q

Larry
marked copy

October 18
~~September 15~~, 1988

Ms. Glenda Malott
New Mexico State Coordinator (6W-QS)
U.S. Environmental Protection Agency
1445 Ross Avenue, 12th Floor
Dallas, Texas 75202-2733

Dear Ms. Malott:

I transmit herewith three signed copies of the document entitled "Technical Agreement for Implementation of Requirements Under Section 304(l) of the Clean Water Act," dated September 1988. The document has been revised to include information identified during the meeting with you and Larry ~~Champaign~~ on October 6, 1988. The Surveillance and Standards Section completed this document in fulfillment of program commitment 2.2.I of the FY 88 Section 106 Work Program for Water Quality Management.

I would be pleased to receive your comments and approval letter at your convenience.

Sincerely,

David F. Tague
Program Manager
Surveillance and Standards Section

mlt

Enclosures

TECHNICAL AGREEMENT

FOR

IMPLEMENTATION OF REQUIREMENTS

UNDER SECTION 304(l)
OF THE CLEAN WATER ACT

BETWEEN

SURFACE WATER QUALITY BUREAU
ENVIRONMENTAL IMPROVEMENT DIVISION
NEW MEXICO HEALTH AND ENVIRONMENT DEPARTMENT

AND

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI

SEPTEMBER 1988

IT IS HEREBY AGREED that the procedures and conditions stipulated in this Agreement represent those actions negotiated and agreed upon by the two parties to this Agreement, and which are to be taken towards the implementation of Section 304(l) of the Clean Water Act, as amended in 1987, entitled "Individual Control Strategies for Toxic Pollutants."

IT IS FURTHER AGREED that the contents of this Agreement, and any other relevant issues which may arise during the course of the execution of this Agreement, are subject to negotiation and amendment or revision as necessary. This Agreement terminates June 30, 1989, unless re-negotiated and re-signed.

SIGNED:

_____ _____

Richard Mitzelfelt, Director
Environmental Improvement Division
New Mexico Health and Environment Department

Date

_____ _____

Myron O. Knudson, P.E., Director
Water Management Division
U.S. Environmental Protection Agency, Region VI

Date

CONTENTS

TECHNICAL AGREEMENT
FOR
IMPLEMENTATION OF REQUIREMENTS
UNDER SECTION 304(l)
OF THE CLEAN WATER ACT

INTRODUCTION

Section 304(l) of the Clean Water Act requires the states to develop lists of impaired waters, lists of point sources and amounts of pollutants causing toxic impacts, and "individual control strategies" for such point sources. These new provisions direct attention to establishing controls where there are known impacts due entirely or substantially to point sources of Section 307(a) toxic pollutants. Controls for these pollutants must be established within the statutory time limits set forth in Section 304(l).

To ensure that the activities carried out pursuant to Section 304(l) are appropriate and technically sound, the U.S. Environmental Protection Agency published "Final Guidance for Implementation of Requirements Under Section 304(l) of the Clean Water Act" in March 1988. This guidance recommends that the regions and states discuss the necessary procedures, and that such procedures be documented and mutually agreed upon in "Technical Agreements." The agreement should contain descriptions of the following elements:

- water quality standards or screening criteria;
- the basic technical approach for assessing water quality, developing lists, locating sources and amounts of toxic discharges, and developing individual control strategies; and
- sources of data.

Region VI of the USEPA developed "Technical Agreement Guidance" and forwarded it to the Division with a letter dated October 6, 1987. Representatives of the New Mexico Environmental Improvement Division's Surface Water Quality Bureau and the USEPA Region VI met in Santa Fe on November 20, 1987, for the purpose of discussing and negotiating the various issues and procedures involved in the implementation of the 304(l) program in New Mexico. The following document sets forth the implementation procedures to be agreed upon by the Division and Region VI.

1.0. STANDARDS AND CRITERIA

LIST BY REFERENCES WATER QUALITY STANDARDS AND SCREENING CRITERIA THAT WILL BE USED TO DETERMINE WHETHER A WATER QUALITY PROBLEM EXISTS.

1.1. Water Quality Standards Revisions

The 1987 triennial review of the state's water quality standards has been completed in accordance with Section 303(c) of the Clean Water Act. On March 8, 1988, the New Mexico Water Quality Control Commission duly adopted revisions to the "Water Quality Standards for Interstate and Intrastate Streams in New Mexico" after consideration of the record of the public hearing held December 10, 1987. The revised standards were filed with the State Records Center March 24, 1988, as Rule No. WQCC 88-1; WQCC 88-1 became effective April 25, 1988, pursuant to state law. The U.S. Environmental Protection Agency approved the state adopted revisions to the water quality standards May 31, 1988.

The federal Water Quality Act of 1987 added new sections to the Clean Water Act at 304(l) and 303(c)(2)(B). Section 304(l) requires the state to develop and submit lists of its waters which are not expected to meet applicable water quality standards after the requirements for technology-based water pollution controls of sections 301(b), 306, and 307(b) are met. Section 303(c)(2)(B) requires the state to adopt numeric water quality standards for toxic pollutants if the discharge or presence of these pollutants in the affected waters can reasonably be expected to interfere with the attainment of designated uses. In accordance with Section 303(c)(2)(B), the Surface Water Quality Bureau will develop and propose at public hearing numeric standards for specific toxic substances (i.e., Section 307(a) "priority pollutants") where these substances have been shown to interfere with the attainment of designated uses in impacted water bodies. The bureau will identify and document impacted water bodies through the Section 304(l) process. In this process the bureau will rely substantially on the USEPA's Section 304(a) numeric criteria published in "Quality Criteria for Water 1986" (EPA 440/5-86-001), referred to as the "Gold Book." The bureau will endeavor to complete this process within the statutory time limits set forth in Section 304(l).

1.2. Criteria and Standards Used for Screenings and Assessments

To supplement the relatively few numeric standards for toxic substances currently set forth in "Water Quality Standards for Interstate and Intrastate Streams in New Mexico," WQCC 88-1, April 25, 1988, the bureau will rely substantially on the U.S. Environmental Protection Agency's Gold Book chronic criteria for the protection of freshwater aquatic life or human health, as appropriate, for data screenings and assessments. Waters designated for use as domestic water supplies will be screened using the drinking water standards set forth in Section 202.B of the "New Mexico Regulations Governing Water Supplies."

2.0. DATA BASE

IDENTIFY THE DATA BASES TO BE USED TO DETERMINE PROBLEM WATERS.

2.1. Sources of Data

The Surface Water Quality Bureau acquires data by ~~four~~ five basic forms of monitoring which are: ambient water quality monitoring at a network of U.S. Geological Survey stations (averaging 60 stations), intensive water quality surveys (averaging about 12 surveys per year), biological monitoring in conjunction with water quality surveys (averaging about eight per year), and compliance sampling inspections of wastewater treatment facilities (averaging about 15 per year). ~~These data will be processed by using a computer-based application of the USEPA's 16 screening categories of waters~~.

2.2. Retrieval of Data

Water quality data collected by the Surface Water Quality Bureau and other agencies are available from STORET. STORET is a national, computer-based data storage and retrieval system of the U.S. Environmental Protection Agency. ~~STORET users may access this data base by using the appropriate selector (e.g., A=21NMEX).~~ All water quality data available in the STORET system will be reviewed for Section 307(a) toxic pollutants, other toxic pollutants, and applicable state water quality standards.

3.0. REPORTING BASIS

IDENTIFY THE WATER BODY SEGMENTS TO BE USED IN LISTING PROBLEM WATERS.

Pursuant to the implementation of Section 304(l), the reporting basis for listing problem waters will be the water quality standards segment, or reaches thereof, as set forth in "Water Quality Standards for Interstate and Intrastate Streams in New Mexico," WQCC 88-1, April 25, 1988. The Surface Water Quality Bureau recently used this basis of reporting to list waters not attaining or partially attaining designated uses in "Water Quality and Water Pollution Control in New Mexico 1988," April 1988 (305(b) report to the U.S. Congress).

Whenever possible, the bureau will list water bodies according to the USEPA's "Reach File System." Specific water bodies are designated within this system by an 8-digit cataloging unit that locates the water body within a certain hydrologic unit and by a 3-digit reach number. For water bodies not in the Reach File System the hydrologic cataloging unit only will be reported.

4.0. DEVELOPMENT OF LISTS

IDENTIFY AND LIST ALL WATERS IMPACTED BY 307(a) TOXIC POLLUTANTS:

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The Surface Water Quality Bureau will develop and submit three lists in accordance with the statutory requirements of Section 304(l) of the Clean Water Act, as described below.

4.1. Comprehensive List of Impacted Waters

The "long list" (Section 304(l)(1)(A)(ii)) is a comprehensive list of waters impacted by point or non-point sources of toxic, conventional, or non-conventional pollutants. The bureau will develop this list by using the candidate long list proposed by the Research Triangle Institute in "State of New Mexico Identification of 304(l) Water Bodies: Candidate Lists" (Report No. RTI/7829/02-04F). RTI identified candidate water bodies through the use of the USEPA's 16 screening categories of waters. Before submitting RTI's candidate long list the bureau will delete ephemeral watercourses not supporting attainable uses, as defined in Section 3-100 of the state's water quality standards. Ephemeral watercourses, generally, are not classified in the state's system of water quality standards because they do not support fisheries or other aquatic life uses.

and additional computer reviews of data by the bureau

4.2. List of Waters Impacted by 307(a) pollutants

The "mini list" (Section 304(l)(1)(A)(i)) is a list of waters that the bureau does not expect will attain applicable water quality standards after revisions pursuant to Section 303(c)(2)(B) have been completed and technology-based controls have been achieved. The projected impacts may be due to point or non-point sources of Section 307(a) priority pollutants. The bureau will develop this list by using RTI's candidate mini list, but will purge RTI's candidate list of ephemeral watercourses using the criterion given in 4.1.

4.3. List of Waters Impacted by Point Sources of 307(a) Pollutants

The "short list" (Section 304(l)(1)(B)) is a list of waters that the bureau does not expect will attain applicable water quality standards after technology-based controls have been achieved. The projected impacts must be due entirely or substantially to point source discharges of Section 307(a) priority pollutants. The bureau will develop this list by using RTI's candidate short list identified in the above-referenced document. Before submitting this list, however, the bureau will delete ephemeral watercourses from RTI's candidate list using the criterion given in 4.1. The bureau will also delete other impacted waters for which the effects have been incorrectly attributed to point sources.

5.0. CONTROL STRATEGY DEVELOPMENT

DETERMINE FOR ALL POINT SOURCE DISCHARGERS IDENTIFIED WHETHER NPDES PERMIT ACTION IS NEEDED.

For waters listed on the final Section 304(l)(1)(B) list, the Surface Water Quality Bureau will identify the point source dischargers and calculate the existing loading rates for each Section 307(a) priority pollutant discharged from each source. The bureau will develop a point source waste load allocation for each discharge which is identified and quantified through this process.

To develop and recommend point source waste load controls, the bureau will follow procedures set forth in the state-adopted, USEPA-approved "State of New Mexico Continuing Planning Process," January 1987. Using these procedures, the bureau will calculate water quality-based effluent limitations and recommend these to the USEPA for inclusion in NPDES permits. The process of state water quality certification of Section 402 permits further ensures that any water quality-based limitation is adequate to provide ambient water quality sufficient to support attainable uses. Concurrently, the bureau will prepare and propose at public hearing updates of Work Element 6, TMDLs and Point Source Waste Load Allocations, in the "State of New Mexico Water Quality Management Plan" using procedures set forth in the state's "Continuing Planning Process."

6.0. WATER QUALITY ASSESSMENT PLAN DEVELOPMENT

DEVELOP FOR ALL WATERS WITH "SUSPECTED" TOXICITY A WATER QUALITY ASSESSMENT PLAN.

The Surface Water Quality Bureau will develop a water quality assessment plan for all waters listed on the Section 304(l)(1)(B) and 304(l)(1)(A)(i) lists having suspected (a.k.a. potential) but unconfirmed toxicity. The assessment plan will describe where additional data are to be obtained to confirm or deny ambient toxicity in these waters. The assessment plan will be integrated into the water quality surveillance ~~program developed annually for the~~ Section 106 work plan. Schedule submitted annually in conjunction with the

In developing the plan and prioritizing the water quality surveillance efforts needed to acquire the data, the bureau will follow procedures set out in "Priority Water Bodies for Water Quality Management," September 1987. This priority water body ranking document is included by reference in the state's "Continuing Planning Process."

7.0. COORDINATION WITH THIRD ROUND PERMITTING PROCESS

THE THIRD ROUND PERMITTING PROCESS AND THE STATE'S ACTIONS UNDER 304(l), THOUGH SEPARATE CONCURRENT PROGRAMS, WILL BE CONDUCTED IN A CONCORDANT MANNER.

The Surface Water Quality Bureau's Section 304(l) toxic substances control program and the USEPA's "Third Round Permit Program" are separate programs in progress concurrently. Both agencies will endeavor to operate their respective programs in a complementary, concordant manner.

8.0. IMPLEMENTATION SCHEDULE

DEVELOP A SCHEDULE FOR SUBMITTALS OF REQUIREMENTS UNDER SECTION 304(l).

The Surface Water Quality Bureau has developed a schedule of target dates for submittal of requirements pursuant to Section 304(l)(1) of the Clean Water Act. This schedule is set forth in "Sixth Section 205(j)(1) Program Plan (FY 87 Construction Grants Appropriation)." The bureau submitted this planning document to the USEPA July 14, 1988. The USEPA awarded a grant for completion of commitments under this program plan August 19, 1988.

METHODOLOGY FOR IDENTIFYING EXCEEDANCES OF WATER QUALITY CRITERIA

Objective

Identification of streams, lakes and reservoirs in New Mexico which are not supporting water quality criteria for priority pollutants. This was done in support of the 304(l) process of identifying waterbodies impaired by toxic pollutants.

Procedure

Ambient water quality data collected by the USGS and the New Mexico Environmental Improvement Division was retrieved from tne STORET water quality database. Most state agency data was from the fixed station monitoring network. Data collected by the state agencies during short term surveys is not always stored in the STORET system. Priority pollutant data from October 1983 to the present was retrieved and evaluated.

Using the STORET "Stand" program data values were compared against an upper limit criteria. The protocol discussed in the 305(b) guidance to identify waterbodies not supporting designated uses was used to identify waterbodies impacted by toxics. Ambient water quality data was compared with toxics criteria. A waterbody was classified as impacted by toxics if:

- o criteria were exceeded more than 25% of the time,

or

- o criteria were exceeded 11 to 25% of the time and the mean of the samples at that station exceeded the criteria.

Use of Remarked Data

Often there are remark codes associated with water quality data stored in STORET. Generally the remark codes indicate that the parameter present was below the detection limit with the detection limit being stored. For the purposes of the analysis remarked data was considered to have a value of zero. Thus, in the analysis data values with remark codes were not considered to have exceeded criteria and were set to zero in order to calculate the mean of the parameter.

Criteria for Assessments

Criteria used in the assessments were obtained from state water quality standards and the EPA "Gold Book", Quality Criteria for Water 1986. Gold book criteria were used only in the absence of appropriate state water quality standards. Criteria used were aquatic life criteria (chronic) and human health (fish and water ingestion).

For those chemicals in which exceedances of criteria were detected the method detection limit was evaluated. Method detection limits were taken from Federal Register, 40 CFR Part 136 for GC approved proceedures. When the method detection limit was greater than the criteria the data was reevaluated using the detection limit. Use of the detection limit is more defensible as it guards against cases where the detection limit was stored without remark codes to identify it as a detection limit.

Table 1 lists priority pollutants for which exceedances of chronic water criteria were detected. Table 2 lists priority pollutants for which exeedances of water and fish consumption criteria were detected. Waterbodies classified as possibly impacted by toxics are included in Appendix 2.

Analysis of Metals Data

Dissolved rather than total metals data was evaluated. The reason for this is the criteria is more appropriate for dissolved data. Dissolved metals data was collected by USGS but not the state agencies.

In the case of some metals it has been shown that there is a relationship between water hardness (as $CaCO_3$) and metal toxicity. In an attempt to allow for variations in hardness, a minumum mean hardness level of 100 mg/L was established using STORET data. All parameters with hardness dependent criteria were then evaluated using a criteria calculated from this 100 mg/L hardness value. If an exceedence of the criteria was detected at this level a determination of mean hardness at that station was made using STORET hardness values. The parameter criteria for this mean hardness was calculated and the station was reevaluated against the adjusted criteria.

USGS versus State Monitoring Data

As described above, dissolved metals data was collected by USGS only. Hence exceedances of metals criteria are not based on state monitoring data. Exceedances of criteria for non-metal priority pollutants in New Mexico are based on state monitoring data.

Analysis of Available Fish Data

Available fish data was analyzed using FDA criteria. There are FDA edible fish criteria for aldrin, dieldrin, chlordane, kepone, DDT, endrin, heptachlor, mirex, toxaphene and total PCBs. No exceedances of FDA criteria were detected in New Mexico.

Sample Size

No attempt was made in this analysis to define a minimum sample size as a restriction for inclusion to the lists. While it is recognized that a small sample size may be less definative in establishing a stream as impaired it is believed that such information may be of value to the user.

Table 1. Priority Pollutants Evaluated for Chronic Aquatic Life Criteria for Toxics in New Mexico

Priority Pollutant	State Standard (ug/L)	EPA Chronic Life Criteria (ug/L)[a]	Detection Limit (ug/L)[b]
Arsenic		190	
Copper		*	
Lead		*	
Mercury		(0.012)	0.2
Selenium		5.0	
Silver		(0.12)	0.2
Zinc		*	
Nickel		*	

Table 2. Priority Pollutants Evaluated for Human Health Criteria For Toxics in New Mexico.

Pollutant	State Standard (ug/L)	EPA Human Health Criteria (ug/L)[c]	Detection Limit (ug/L)[b]
Selenium	10		
Nickel		13.4	
Arsenic	50		
Lead	50		
Silver	50		
Mercury	2		

a) Chronic Aquatic Life Criteria. EPA 440/5-86-001.1986.
b) Detection Limit using GC Analysis Method. 40 CFR Part136.1984.
c) Human Health Criteria for Fish and Water Ingestion. EPA 440/5-86-001.1986.
* Hardness dependent criteria.
() Criteria Lower Than Detection Limit.

NEW MEXICO STATIONS WITH EXCEEDENCES OF FRESHWATER AQUATIC CRITERIA FOR DISSOLVED METALS.

STATION LOCATION	STATION	CHEMICAL	CRITERIA	CRITERIA EXCEEDANCES	% EXCEEDANCES	STATION MEAN	GREATEST VALUE	VIOLATION MEAN
RIO PAGUTE BELOW JACKPILE MINE NEAR LAGUNA	08349800	Se	5.000	1 / 4	25	17	61	
PECOS RIVER AT RED BLUFF	08407500	Hg	0.200	7 /15	47	.26	0.8	0.41
PUERCO RIVER AT GALLUP	09395500	Se	5.000	1 / 1	100	37	37	
CANADIAN RIVER ABOVE NEW MEXICO-TEXAS STATE LINE	07227140	Hg	0.200	4 / 9	44	0.24	0.9	0.425
ANIMAS RIVER AT FARMINGTON	09364500	Hg	0.200	4 /14	29	0.25	1.4	0.625
SAN JUAN RIVER AT SHIPROCK	09368000	Hg	0.200	4 /14	29	0.21	0.6	0.475
CHACO RIVER NEAR WATERFLOW	09367950	Se	5.000	1 / 3	33	15.67	42	
		Hg	0.200	1 / 3	33	0.23	0.4	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Pb	3.200	1 / 2	50	4.5	8	
	09367540	Hg	0.200	1 / 2	50	0.2	0.3	
CANADIAN RIVER NEAR SANCHEZ	07221500	Ag	0.200	1 / 4	25	1.0	1.0	
	07221500	Hg	0.200	3 / 8	38	0.16	0.3	0.267
RIO GRANDE FLOODWAY AT SAN MARCIAL	08358400	Ag	0.200	2 / 7	29	1.27	3.0	2.0
RIO GRANDE CONVEYANCE CHANNEL AT SAN MARCIAL	08358300	Pb	3.200	3 / 9	33	3.11	10.0	6.0
RIO GRANDE CONVEYANCE CHANNEL AT SAN ACACIA	08354800	Pb	3.200	1 / 2	50	4.0	5.0	
RED RIVER NEAR QUESTA	08265000	Cu	14.000	1 / 1	100	510	510	
	08265000	Ni	187.000	1 / 1	100	200	200	
	08265000	Zn	125.000	8 /18	50	299	2600	542.5
RED RIVER BELOW QUESTA	08266500	Zn	125.000	4/7 /15	32/27	82.5	160	126
LATIR R.5-SANGRE DE CHRISTO GRANT	364808105274510	Ag	0.200	1 / 1	100	12.0	12.0	
LATIR CREEK OUTFLOW LAKE 9	08254400	Ag	0.200	1 / 1	100	6.0	6.0	

LATIR CREEK OUTFLOW LAKE 2	08254425	Ag	0.200	1 / 1	100	7.0	7.0

NEW MEXICO STATIONS WITH EXCEEDENCES OF HUMAN HEALTH CRITERIA FOR DISSOLVED METALS.

STATION LOCATION	STATION	CHEMICAL	CRITERIA	CRITERIA EXCEEDANCES	% EXCEEDANCES	STATION MEAN	GREATEST VALUE	VIOLATION MEAN
RIO PAGUATE BLW JACKPILE MINE NEAR LAGUNA	8349800	Se	10.000	1 / 4	25	17	61	
SEC 5 TSE BENITA WASH AT MCKINLEY MINE NEAR GALLUP	353871085840 10	Se	10.000	1 / 1	100	37	37	
CHACO RIVER NEAR WATERFLOW	09367950	Se	10.000	1 / 3	33	15.7	42	
SAN JUAN RIVER NEAR FRUITLAND	09367540	Ni	13.400	1 / 2	50	22.5	44	
RED RIVER NEAR QUESTA	08265000	Ni	13.400	1 / 1	100	200	200	

NEW MEXICO
HEALTH AND ENVIRONMENT
DEPARTMENT

ENVIRONMENTAL IMPROVEMENT DIVISION
1190 St. Francis Drive
Santa Fe, New Mexico 87503

Richard Mitzelfelt
Director

GARREY CARRUTHERS
Governor

CARLA L. MUTH
Secretary

MICHAEL BURKHART
Deputy Secretary

February 1, 1989

Ms. Glenda Malott, 6W-QS
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75205-2733

RE: TASK II.2.: FY 87 SECTION 205(j)(1) WORKPLAN

Dear Ms. ~~Malott~~ Glenda:

The Planning Section of the Surface Water Quality Bureau has completed item II.2. **(Toxic Substance Pollution: Lists of Impaired Waters and Individual Control Strategies)** of the FY 87 Section 205(j)(1) workplan and includes five copies of the output for your review. We have determined that in New Mexico no individual control strategies are necessary to meet requirements of Federal law.

In that the Planning Section has expended over 1.5 person-years on development of these lists, I request that EPA accept the transfer of the time alloted for development of the individual control stategies to the list development.

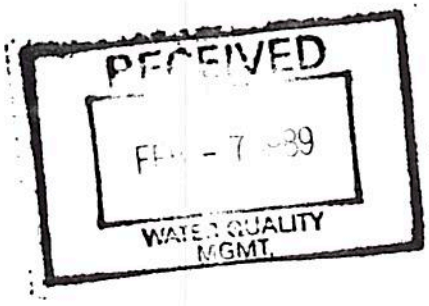
Sincerely,

Jim

Jim Piatt
Program Manager
Planning Section
Surface Water Quality Bureau

Enclosure

JP/sjh



Jerry

TENTATIVE WATER QUALITY SURVEY SCHEDULE - FY 89

Stream Surveys	Stream Segment(s)	Principal Investigator	Survey Dates	ISR	304(l)	Bio*
Rio Pueblo de Taos from mouth to Los Cordovas	2-120	Larry Smolka	Feb. - Sept.	893501	X	X
Perennial reaches of the Rio Puerco (east) and its tributaries	2-106	Larry Smolka	March	893502	X	X
Vermejo River from mouth to USGS gaging station near Dawson	2-306	Larry Smolka	April	893503	X	X
Rio Grande from Caballo Dam to Leasburg Dam	2-101, 2-102	Steve Pierce	April	893504	X	
Hunter, Raton and Una de Gato creeks from mouth to headwaters	2-305, 2-306	Steve Pierce	May	893505	X	X
Rio de las Vacas and Clear Creek, and Cebolla Creek above Fenton Lake	2-106	Steve Pierce	May	893506	X	X
Ponil Creek and its tributaries	Unclassified	Steve Pierce	June	893507	X	X
Rio Grande from Taos Junction Bridge to Otowi Bridge	2-111	Larry Smolka	July	893508	X	X
Animas and La Plata rivers from mouth to NM-Colorado state line	2-402, 2-403	Larry Smolka	August	893509	X	X
Cimarron River from mouth to Eagle Nest Dam	2-305, 2-306	Steve Pierce	September	893510	X	X
Lake Surveys						
Bluewater Resrvoir	2-106	Debby Potter	**	893511	X	
El Vado Reservoir	2-117	Dan Davis	**	893512	X	
Navajo Reservoir	2-406	Debby Potter	**	893513		
San Leonardo Lake	2-120	Dan Davis	**	893514		
Sumner Reservoir	2-210	Dan Davis	**	893515	X	

*Benthic macroinvertebrates or fisheries will be inventoried.

**Refer to "New Mexico Clean Lakes Program: Lake Water Quality Assessment for FY 89-90."

Sixth Section 205(j)(1) Program Plan
(FY 87 Construction Grants Appropriation)

TOXIC SUBSTANCE POLLUTION: LISTS OF IMPAIRED WATERS IN THE STATE OF NEW MEXICO

Prepared by
Planning Section
Surface Water Quality Bureau
Environmental Improvement Division

January 1989

CONTENTS

APPENDICIES

TABLES

INTRODUCTION

This report presents and discusses three lists of surface waters in New Mexico impacted by toxic, conventional, and nonconventional pollutants.

The 1987 amendments to the federal Clean Water Act (CWA) require an increased emphasis on the identification and control of toxic pollutants in surface waters. Specifically, Section 304(l) was added to the Act and requires development of lists of waters impaired by toxic, as well as conventional and nonconventional, pollutants from both point and nonpoint sources; identification of point sources which cause toxic impacts and the amounts of toxic pollutants they discharge; and individual control strategies for each such discharge. Toxic pollutants covered under Section 304(l) are identified in Section 307(a) of the CWA and are known as "priority pollutants". Lists required under Section 304(l) are:

- "Long List" (Section 304(l)(1)(A)(ii)): A comprehensive list of waters impacted by point or nonpoint source discharges of toxic, conventional, and nonconventional pollutants.

- "Mini List" (Section 304(l)(1)(A)(i)): A list of waters for which a State does not expect to achieve State water quality standards revised pursuant to Section 303(c)(2)(B) for priority pollutants after technology-based requirements have been met, due to either point or nonpoint sources of pollution. This list is a subset of the "long list".

- "Short List" (Section 304(l)(1)(B)): A list of waters for which a State does not expect applicable water quality standards (numeric or narrative) to be achieved after technology-based requirements have been met due entirely or substantially to point source discharges of priority pollutants. This list is a subset of the "mini list".

Briefly, the requirements of these lists are:

List	Pollutants covered	Criteria used	Sources covered
Short	Priority pollutants	State narrative and numeric standards	Point sources
Mini	Priority pollutants	State narrative and numeric standards	Point and nonpoint sources
Long	Conventional, toxic, and nonconventional pollutants	State narrative and numeric standards	Point and nonpoint sources

Numeric standards for some conventional and nonconventional pollutants are contained in the Water Quality Standards for Interstate and Intrastate Streams in New Mexico. The primary basis for State water quality standards for priority pollutants are the general standards contained in this document in Section 1-102.F. (General Standards, Hazardous Substances). Numeric criteria used to

evaluate attainment of the narrative standards in Section 1-102.F. are the US Environmental Protection Agency (EPA) criteria contained in Water Quality Criteria, 1972 (criteria for irrigation and livestock watering) and Quality Criteria for Water, 1986 (criteria for freshwater life). Domestic water supply standards for eight metals are contained in Section 1-102.F. by reference.

Development of the lists. The lists were prepared through an iterative process. First, Research Triangle Institute (RTI) developed, under contract to EPA, candidate short and long lists to help the states meet Section 304(l) requirements. RTI did not develop a candidate mini list for New Mexico. The Environmental Improvement Division (EID) used RTI's two lists as a basis for development of preliminary state lists. The final lists, identified and discussed below, were developed through further evaluation of stream reaches on the preliminary state lists. Reaches were also added to each list by EID.

In preparing the three lists, EID has extended its examination of surface waters covered by the State numeric and narrative standards to include a review of ephemeral streams. Ephemeral streams are important in New Mexico for two reasons. First, pollutants contained in discharges to ephemeral streams may reach and impact perennial surface waters or ground water supplies. Additionally, in a semi-arid state such as New Mexico, it must be assumed that all available water is used. Possible uses of ephemeral waters or discharges to ephemeral waters include irrigation, livestock watering, wildlife watering, primary contact recreation by children, and drinking water supply. Where attainable, uses should be identified and protected.

THE SHORT LIST

The short list identifies those waters for which the State does not expect numeric or narrative water quality standards for the 126 priority pollutants to be achieved after technology-based requirements have been met due entirely or substantially to point source discharges. These 126 pollutants, listed in Section 307(a) of the federal Clean Water Act, are identified in Table 1.

Development of the candidate short list. RTI identified candidate waterbodies for the short list through the use of 16 screening categories developed by EPA (see Table 2). A reach was placed on the candidate short list if toxic pollutants were known or suspected to be present and a possible point source origin for these pollutants was present. Information used in developing the short list was obtained from EID staff, EID reports, EPA's NPDES files, and ambient data contained in STORET, the national EPA water quality data base. Additionally, the possibility of toxic pollutants in toxic amounts was inferred through the results of computerized dilution analyses using a variety of EPA data bases and analytical tools. Some data used in these analyses are generalized, such as the use of national data for major industrial categories and estimates of Best Available Technology pollutant concentrations in effluents.

The candidate short list for New Mexico prepared by RTI contains 18 entries which, due to the conservative approach to list development described above, are described as having a "potential" for belonging on the final short list. According to the RTI report, no waterbodies in New Mexico have a "high probability" of belonging on the final short list.

Development of the State preliminary short list. EID reviewed available data for the reaches and point sources on RTI's candidate short list and produced a State preliminary short list. The point sources identified in the RTI report on listed reaches were reviewed and the list was corrected for each reach. EID identified additional point sources to listed reaches, and in two cases where point source discharges were misassigned to a reach, new reaches were added.

Information on industrial and major municipal discharges for this initial review was obtained primarily from EID's NPDES files. Minor municipal and domestic discharges which receive no significant industrial contribution were assumed to be free of priority pollutant constituents, unless there was evidence to the contrary.

As a result of this review, twelve reaches on RTI's candidate short list were retained on EID's preliminary short list. Several reaches were retained pending examination of ambient data, even though 307(a) toxics were not expected to be associated with point sources on these streams. Eight stream reaches were eliminated from the candidate short list. Table 3 identifies these reaches and provides the rationale for their removal from the list.

Table 1. Section 307(a) toxic pollutants.

Acenaphthene
Acrolein
Acrylonitrile
Aldrin/Dieldrin
Antimony and compounds*
Arsenic and compounds
Asbestos
Benzene
Benzidine
Beryllium and compounds
Cadmium and compounds
Carbon tetrachloride
Chlordane (technical mixture and metabolites)
Chlorinated benzenes (other than dichlorobenzenes)
Chlorinated ethanes (including 1,2-dichloroethane, 1,1,1-trichloroethane, and hexachloroethane)
Chloroalkyl ethers (chloromethyl, chloroethyl, and mixed ethers)
Chlorinated naphthalene
Chlorinated phenols (other than those listed elsewhere: includes trichlorophenols and chlorinated cresols)
Chloroform
2-chlorophenol
Chromium and compounds
Copper and compounds
Cyanides
DDT and metabolites
Dichlorobenzenes (1,2-, 1,3-, and 1,4-dichlorobenzenes)
Dichlorobenzidine
Dichloroethylenes (1,1- and 1,2-dichloroethylene)
2,4-dichlorophenol
Dichloropropane and dichloropropene
2,4-dimethylphenol
Dinitrotoluene
Diphenylhydrazine
Endosulfan and metabolites
Endrin and metabolites
Ethylbenzene
Fluoranthene
Haloethers (other than those listed elsewhere: includes chlorophenylphenyl ethers, bromophenylphenyl ether, bis(dischloroisopropyl) ether, bis-(chloroethoxy) methane and polychlorinated diphenyl ethers)
Halomethanes (other than those listed elsewhere: includes methylene chloride, methylchloride, methylbromide, bromoform, dichlorobromomethane, trichlorofluoromethane, dichlorodifluoromethane)
Heptachlor and metabolites
Hexachlorobutadiene
Hexachlorocyclohexane (all isomers)
Hexachlorocyclopentadiene
Isophorone
Lead and compounds
Mercury and compounds
Naphthalene
Nickel and compounds
Nitrobenzene
Nitrophenols (including 2,4-dinitrophenol, dinitrocresol)
Nitrosamines
Pentachlorophenol
Phenol
Phthalate esters
Polychlorinated biphenyls (PCBs)
Polynuclear aromatic hydrocarbons (including benzanthracenes, benzopyrenes, benzofluoranthene, chrysenes, dibenzanthracenes, and indenopyrenes)
Selenium and compounds
Silver and compounds
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)
Tetrachloroethylene
Thallium and compounds
Toluene
Toxaphene
Trichloroethylene
Vinyl chloride
Zinc and compounds

*The term "compounds" includes organic and inorganic compounds.

Table 2. Screening categories for 304(l) lists.

1. Waters where fishing or shellfishing bans and/or advisories are currently in effect or are anticipated.

2. Waters where there have been repeated fish kills or where abnormalities (cancers, lesions, tumors, etc.) have been observed in fish and other aquatic life during the last 10 years.

3. Waters where there are restrictions on water sports or recreational contact.

4. Waters identified by the States in the 1982, 1984, 1986 or draft 1988 §305(b) reports as either "partially achieving" or "not achieving" designated uses.

5. Waters identified by the States and reported to EPA in the 3rd quarter of FY87 as waters needing water quality-based control for "toxics" and "nontoxics."

6. Waters identified by the States as priority waterbodies in FY86 because of impaired or threatened uses.

7. Waters where ambient data indicate the presence of 307(a) toxic pollutants from primary industries.

8. Waters for which effluent toxicity test results indicate possible violations of State water quality standards, including narrative "free-from" criteria or EPA criteria where State standards are not available.

9. Waters with primary industrial major dischargers where simple dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not available) for 307(a) toxic pollutants, ammonia, or chlorine. These dilution analyses could be based upon estimates of BAT levels from effluent guidelines development documents, NPDES permit application data (e.g., Form 2C), Discharge Monitoring Reports (DMRs), or other available information.

10. Waters with municipal major dischargers requiring pretreatment where simple dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not yet available) for §307(a) toxic pollutants, ammonia, or chlorine. These dilution analyses could be based upon data from NPDES permit applications, Discharge Monitoring Reports (DMRs), or other available information.

Table 2. (Continued.)

11. Waters with known or suspected use impairments where dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not available) for §307(a) toxic pollutants, ammonia, or chlorine. This category includes waters with facilities not included in the previous two categories such as municipal majors not required to have pretreatment, Federal majors, and minors having water quality pretreatment, Federal majors, and minors having water quality impacts. These dilution analyses could be based upon estimates of BAT levels from effluent guideline development documents, NPDES permit application data, Discharge Monitoring Reports (DMRs), or other available information.

12. Waters classified for uses that will not support the "fishable/swimmable" goal of the Clean Water Act.

13. Waters where ambient toxicity or adverse water quality conditions have been reported by local, State, EPA, or other Federal agencies, the private sector, public interest groups, or universities.

14. Waters identified as having impaired or threatened designated uses in the Clean Lakes Assessment conducted under §314 of the Clean Water Act.

15 .Waters identified as impaired by nonpoint sources in the 1985 America's Clean Water: States' Nonpoint Source Assessment (Association of State and Interstate Water Quality Pollution Control Administrators (ASIWPCA)) and waters identified as impaired or threatened in the nonpoint source assessment under §319 of the Clean Water Act.

16. Surface waters impaired by pollutants from hazardous waste sites on the National Priority List prepared under §105(8)(A) of CERCLA.

Table 3. Stream reaches removed from the candidate short list.

Hydrologic unit	Stream segment	Reach	Rationale for removal	Comments
13020204024	Unclassified	Cañada del Ojo	Ephemeral reach. No point source discharge since 1980.	No ambient toxics data.
13020205016	Unclassified	Cañada Marcelina	Ephemeral stream. Never any point source discharge.	No ambient toxics data.
14080106004	2-401	Chaco Wash between Chinle Wash and Cottonwood Arroyo	Ephermeral stream. No indication of toxic discharges from point sources.	Referred to mini list for review of nonpoint source toxic pollution.
13020201009	Unclassified	Galisteo Creek	Ephemeral stream. No indication of toxic discharge from point source.	No ambient toxics data.
13030202004	Unclassified	Lampbright Draw	Ephemeral reach. Permit specifies no discharge.	No ambient toxics data.
11080001009	2-306	Raton Creek	Toxics not expected in permitted discharge.	
13020204008	2-105	Rio Puerco from Salado Creek to Cañada del Ojo	Ephemeral reach. No active point source discharge.	Referred to mini list for review.
13020204015	2-105	Rio Puerco from Arroyo Chijuilla to Nacimiento Creek	Ephemeral reach. Never an active point source discharge.	

Development of the State final short list. To develop the final short list, EID reviewed ambient toxics data for the period of record available from STORET, data for the Albuquerque and Las Cruces pretreatment programs, and results of biomonitoring conducted by EPA or private dischargers for the 12 reaches retained on the preliminary list. These data were reviewed for attainment of the EPA acute criteria for freshwater life and other appropriate criteria. Because criteria for some priority pollutants are hardness dependent, hardness data were also determined and these criteria adjusted accordingly. Available data for two additional reaches were evaluated at the request of EPA.

Furthermore, EPA requested that the EID Hazardous Waste Bureau be consulted regarding facilities listed under RCRA (the federal Resource Conservation and Recovery Act) which have NPDES permits. Facilities listed under RCRA either handle or have the potential to generate hazardous material or both. The presence of hazardous materials at a site does not necessarily mean that these materials are being discharged to surface waters. Nor does the issuance to an NPDES permit to a facility necessarily mean that the facility actually discharges. The Hazardous Waste Bureau has to date carried out relatively few site inspections on RCRA facilities, nor has it collected any stream or liquid samples at these sites. Consequently, information on these facilities was obtained primarily from available data in the NPDES permit files and from STORET.

The review served to identify a few point sources which might be adversely affecting applicable uses due to toxic constituents in the discharges, or for which there were insufficient data to determine impacts on receiving waters. Appropriate recommendations have been made regarding these point sources. The review also identified some reaches impacted by nonpoint or natural sources. These reaches were referred to the mini list for review.

In conclusion, EID has determined that no surface waters in New Mexico are eligible for short list inclusion. Consequently, individual control strategies for point source discharges are not required. The rationale for this determination is discussed below on a reach-by-reach basis.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13030202006	2-803	Whitewater Creek	Removed

Whitewater Creek is an ephemeral tributary to San Vicente Creek, itself an ephemeral tributary to the Mimbres River. Whitewater Creek was retained on the 304(l) preliminary short list in order to consider recent discharges from Phelps-Dodge's Chino copper mining operation, the only point source located on this reach. Although no ambient data from STORET are available for this reach, Whitewater Creek is known to be heavily impacted due to historic mining point and nonpoint sources.

Chino's NPDES permit for discharge of process wastewaters from leaching operations specifies no discharge but allows an exemption from the requirement in accordance with guidelines found in 40 CFR 440.131(c). This operation also has a State approved ground water discharge plan which does not allow discharges to Whitewater Creek. The mine and downstream drainages are being investigated as a potential Superfund site. EID considers that this operation is in violation of both its NPDES permit and its ground water discharge plan because of recent discharges.

As a result of higher than average rainfalls during July and August 1988, Chino claims that the design capacity of containment reservoirs for combined storm and process water was exceeded. Between July 10 and July 20, several discharges from the reservoir's outfall occurred which released an estimated 3,078,000 gallons of combined mine and storm water into Whitewater Creek. In addition, on July 12, approximately 0.5 million cubic feet of neutralized smelter acid blowdown sludge and sediment were released when a levee between Whitewater Creek and a containment lake was breached. There has been no explanation as to why the levee breached.

Furthermore, on August 22, 1988, Chino notified EID that it intended to continue to discharge untreated acidic mine water to alleviate water storage problems. The discharge, with a flowrate estimated at 2,000-4,000 gallons per minute, was continuous from August 20 until the middle of September. It is not known at this time what measures Chino will take to alleviate the problem of inadequate mine water storage capacity.

Water samples for general chemistry and heavy metals were collected by EID in July, August, and September. Sample results show that the irrigation and livestock watering criteria for cadmium, copper, and zinc are exceeded. Nickel also exceeds the irrigation criterion; there is no livestock watering criterion for nickel. In addition, these four metals exceed the drinking water standards applicable to ground water in the area.

Whitewater Creek is removed from the 304(l) short list because Chino's NPDES permit may already be as stringent as possible. Because EID considers that Chino is not in compliance with its NPDES permit, it has recommended that EPA pursue enforcement action; EPA has consequently requested information from Chino to determine whether enforcement action is appropriate.

Hydrologic Unit	Stream Segment	Reach	Short List Status
14080104001	2-404 and 2-403	Animas River	Removed

The Animas River in New Mexico was retained on the preliminary short list pending examination of ambient data.

Four point sources with NPDES permits are located on this reach. Of these, the Farmington Municipal Operations Center (ground water clean-up) has never discharged and Farmington Sand and Gravel Co. has not discharged since 1982. The other two point source discharges are the City of Aztec's minor municipal treatment plant and Farmington's Animas Steam Plant. Section 307(a) toxics are not expected to be associated with either discharge.

Ambient data for heavy metals are available from four sites on the Animas River. Data from the 1960s are available at Cedar Hill, upstream of all point sources, and for two sampling sites, each sampled one time, between Aztec and Farmington. Long-term data are available from stations located near the mouth of the Animas in Farmington, below all point sources.

Individual copper and silver exceedances were noted upstream at Cedar Hill. No exceedances of priority pollutants were observed at the two sites between Aztec and Farmington. When adjusted for hardness, individual large exceedances of acute criteria were noted at Farmington for chromium, copper, lead, and zinc. In general, this reach is much more heavily mineralized at its mouth near Farmington than it is at its New Mexico origin at the New Mexico-Colorado border. These impacts are believed to be due to nonpoint sources or to natural causes.

The Animas River is removed from the 304(l) short list because ambient data do not indicate significant toxic contamination from any point source. This reach is referred to the 304(l) mini list for review.

Hydrologic Unit	Stream Segment	Reach	Short List Status
14080106026	Unclassified	Kim-Me-Ni-Oli Valley	Removed

Kim-Me-Ni-Oli Wash is an ephemeral tributary to an ephemeral reach of the Chaco River. This wash and its tributaries were retained on the preliminary short list pending examination of ambient data.

NPDES permits were issued to five uranium mines on this reach. These five are Phillips Petroleum Co.'s Nose Rock Mine, Conoco's Borrego Pass Mine, Phillips Uranium's Nose Rock operations (two mines), and United Nuclear Corp.'s Dalton Pass Mine. Of these, only Conoco's Borrego Pass Mine was ever operational (1978-1982). From available Discharge Monitoring Reports, this mine apparently never discharged. NPDES permits for all five mines have been discontinued. Two additional point sources, a minor domestic and a minor municipal, receive no significant industrial contribution and are not expected to discharge 307(a) toxics. These two discharges are the U.S. Bureau of Indian Affairs' Lake Valley Boarding School and the Navajo Tribal Utility Authority's Crownpoint plant.

Ambient data are available for heavy metals from several sampling stations, all located downstream from identified point sources. When adjusted for hardness, ambient data show mean levels of chromium, copper, and zinc at several stations which exceed EPA criteria for irrigation and for livestock watering, both attainable uses on this reach. These data are from only a small number of samples at each station and date from 1981 and 1982.

Kim-Me-Ni-Oli Valley is removed from the 304(l) short list because its reaches are ephemeral and because there is no longer an active industrial point source discharge to these watercourses. This reach is referred to the mini list for review.

Hydrologic Unit	Stream Segment	Reach	Short List Status
15020006007	**Unclassified**	**Puerco River from its headwaters to Bread Springs Wash below Gallup**	**Removed**

The Puerco River in New Mexico is an ephemeral stream in the Lower Colorado River Basin. Best professional judgment indicates that irrigation as well as livestock and wildlife watering are attainable uses on this stream. The Puerco River was retained on the preliminary short list pending examination of ambient data.

Three point sources with NPDES permits to discharge to the North Fork of the Puerco River have been identified. United Nuclear Corporation's Northeast Church Rock and Old Church Rock Mines are on standby status and have not discharged since 1983. Quivira's Church Rock Mine is also on standby status and has not discharged since February 1986. In addition, two domestic dischargers, Indian Hills Mobile Home Park and the Fort Wingate Schools, as well as the City of Gallup, a major municipal discharger, are located on the Puerco River below the confluence of the North and South Forks of the river. Neither of the domestic wastewater discharges receives an industrial contribution, therefore, neither is expected to discharge 307(a) toxics. The Gallup treatment plant, however, may receive industrial discharges which require pretreatment. EPA is in the process of determining whether two companies: Kachina Packing Co.,Inc., a slaughterhouse and leather tanning operation, and DCI Plasma Center, Inc. will require pretreatment.

Elevated levels of metals are observed in background data collected both on the North Fork above the mining operations and on the South Fork above Gallup. Ambient metals data collected downstream from the mine discharges to the North Fork of the Puerco River show levels of arsenic, cadmium, and lead which exceed EPA criteria for livestock watering and cadmium and zinc levels which exceed the irrigation criteria. Most of these data date from July 1979 through March 1982, and may be associated primarily with the investigation of the United Nuclear mill tailings spill of July 1979.

EID has entered into a cooperative agreement with the U.S. Geological Survey to undertake a comprehensive five-year study of the entire Puerco River drainage in New Mexico. Both surface and ground water quality will be investigated. These data should provide additional information on the amount of background loading to this system and on the relative contributions of the mining operations.

Because it is an ephemeral stream and at present receives no industrial discharges, and because high background loadings of toxics have been identified, the Puerco River is removed from the 304(l) short list. This river is referred to the mini list for examination of potential nonpoint sources of the impacts noted.

Hydrologic Unit	Stream Segment	Reach	Short List Status
11080001012	2-306	York Canyon Creek	Removed

York Canyon Creek was retained on the preliminary short list pending examination of ambient data. Two point sources located on this reach have been identified. Kaiser Coal Co.'s Cimarron Mine is not presently operational. The York Canyon #1 Mine discharges infrequently.

Although no ambient data are available for this reach, a few samples collected during 1981 from a station on the Vermejo River below its confluence with York Canyon Creek indicate no exceedances of EPA acute criteria for freshwater life.

York Canyon Creek is removed from the 304(l) short list because there is no evidence which suggests reach impairment due to toxics. If coal mining activities increase, EID recommends the collection of ambient data on this reach.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13020101027	2-120 and 2-119	Red River from Cabresto Creek to the Rio Grande	Removed

This reach of the Red River was retained on the preliminary short list pending examination of ambient data.

One permitted point source on this reach, Molycorp's Molybdenum Mine, has been identified; this operation has two permitted discharges. The first outfall (001), for the discharge of process water from milling operations and tailings disposal, has not discharged since February 1986 when mining operations were put on standby status. The second outfall (002), which discharges tailings impoundment seepage, is currently discharging.

Ambient data from below the second discharge point show levels of cyanide and copper which exceed EPA acute criteria for freshwater life. However, data from upstream of this discharge point also show exceedances of cyanide and copper as well as of cadmium, lead, and zinc. These data indicate that nonpoint sources and natural mineral loading in both this reach and up river from this reach are currently the primary sources of the toxicants.

Potential nonpoint and natural sources of the exceedances are: spills from the mine's tailings slurry lines, erosion from spoil piles, streamside construction activities, and the geologic characteristics of the area. Since 1976, more than 30 breaks in the tailings slurry lines have occurred. These breaks have allowed untreated slurry to flow into the river with subsequent increases in concentrations of sediment-associated metals. In addition, recent studies have suggested that the geologically derived materials of the area could provide a source of mineralization when they are disturbed by human activities. Samples taken by EID on August 18, 1986 during a short duration storm event show the effect of surface runoff on the Red River. During the event the river pH decreased from 8.1 to 3.8 and total suspended solids rose from 3 to 7,300 mg/l, resulting in large increases in arsenic, cadmium, chromium, lead, silver, copper, zinc, and aluminum concentrations. Several of these parameters exceeded EPA acute criteria for freshwater life.

Several steps are being taken to determine the sources and impacts of toxics in the Red River. Molycorp, in accordance with NPDES permit renewal requirements, performed a biomonitoring test on August 7-8, 1988 on effluent from the tailings seepage impoundment. Using various effluent percentages in the test waters, survival and reproduction rates for Ceriodaphnia dubia and survival and growth rates for Pimephales promelas (fathead minnow) were determined. Test results showed that the mean number of young produced for the effluent concentration corresponding to low flow were significantly lower than the number of young produced in the control. No other significant differences were observed. In addition to this test, Molycorp will be required to perform quarterly biomonitoring on the combined effluent discharges for a period of at least one year, starting within 60 days after mill startup. This biomonitoring should define the presence or absence of "toxic substances in toxic amounts".

In order to collect additional water quality data, EID conducted an intensive survey in September and October 1988 from above the Town of Red River to the U.S. Forest Service Ranger Station at Questa, which is above Molycorp's discharge. Results from this study are not yet available. During this water quality survey, the NM Department of Game and Fish conducted a census of fish populations above and below the Molycorp discharge. In areas above the discharge, fish densities ranged from very high to zero depending on the amount of nonpoint source pollution,

habitat disturbance, and fishing pressure.a/ The river immediately upstream of the Ranger Station was completely devoid of fish due to mining related and other nonpoint source pollution. Fish populations below the Molycorp discharge ranged from high to poor due to the same nonpoint perturbations. Molycorp's point source discharge did not have a discernable impact on the fish populations. In conjunction with the intensive survey, EPA conducted instream biomonitoring at seven sites above and below the Town of Red River and the Molycorp mine and mill. No significant effect of either water or sediment samples from Red River proper was observed on test organisms. However, a sediment sample from Bitter Creek produced a 60 percent mortality rate on D. pulex. Bitter Creek enters the Red River at the Town of Red River; possible nonpoint sources located on this creek are: old mine workings, habitat destruction, and channelization of the lower reaches of the creek. This finding from EPA's biomonitoring tends to confirm the impact of nonpoint sources on the Red River and its aquatic life.

The Red River is removed from the 304(l) short list because data indicate that exceedances are due primarily to nonpoint sources. This reach is referred to the 304(l) mini list for consideration of possible nonpoint or natural sources of the toxic exceedances noted.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13030203014 and 13030203016	**2-105**	**Rio Grande from the mouth of the Jemez River to Isleta Pueblo boundary**	**Removed**

Hydrologic unit 13030203016 was retained on the preliminary short list pending examination of ambient and pretreatment data. In order to review the downstream impacts of point source discharges in Albuquerque, consideration of this reach of the Middle Rio Grande was extended to the Isleta Pueblo boundary in hydrologic unit 13030203014.

One listed discharger, Charles Caruso, has ceased discharging, and the NPDES permit for this discharge has been terminated. Ten point sources with active NPDES permits remain in these reaches of the Rio Grande. Albuquerque Utilities in Rio Rancho and Sandia Peak Ski Basin are both domestic discharges. The Town of Bernalillo, a minor municipal, does not receive any significant industrial contribution. These three discharges are assumed to be free of 307(a) toxic constituents. Both PNM's Person Generating Station and Reeves Generating Station are in compliance with NPDES permit requirements. Although the Atchison, Topeka and Santa Fe railroad yard intends to discharge only stormwater in the future, it has

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a/Michael Hatch, NM Department of Game and Fish. December 20, 1988. Personal communcation.

in the past discharged wash water as well. The possibility of toxic contaminants in these discharges has not yet been investigated. A second Albuquerque Utilities wastewater treatment facility and the Roberts Oil Co. gasoline contamination clean-up site have not yet begun to discharge. Other dischargers are the City of Albuquerque wastewater treatment facility, the Siemens Transmission Systems operation, and the General Electric aircraft engines facility; these three discharges are discussed further below.

Ambient data for metals and pesticides are available for the USGS Central Avenue Bridge station in Albuquerque from 1981 on. Metals, pesticides, and other organic data are available for the USGS station near Isleta from 1977 on. In 1979, EID collected samples for all priority pollutants at the Rio Bravo Bridge station in Albuquerque's South Valley and at two stations near Isleta at the downstream end of these reaches; these samples were collected for an EPA study. Single samples were collected by EID at three sites below the Central Avenue Bridge station in 1983-84. During an intensive survey conducted by EID in July 1988, single samples for selected 307(a) toxics were collected all along both reaches. No exceedances of acute criteria for organics were observed at any of the stations.

When adjusted for hardness, exceedances of the acute criterion for copper were observed at both USGS stations, at the Central Avenue Bridge and near Isleta. The single EID sample collected near Isleta in 1984 showed an exceedance of the acute criterion for lead.

In the late 1970s, EID conducted a study of Albuquerque's stormwater runoff. Samples were collected from two of Albuquerque's main drains for this study. Although drain samples do not represent ambient river quality, they do indicate the kinds of nonpoint source contaminants discharged to these reaches of the Rio Grande during storm events . Grab samples were collected from the North Floodway Diversion Channel at 15-minute intervals during six major runoff events; this channel drains runoff from 63 percent of Albuquerque's area. One additional storm event was sampled at the Bridge Boulevard Pumping Station's collection basin for stormwater runoff from Albuquerque's downtown area.

Data indicate that levels of lead and zinc at the North Floodway Channel were consistently above acute criteria during these storm events. Many exceedances of the acute criteria for cadmium were also observed, as well as one exceedance of the acute criterion for mercury. Lead and zinc concentrations at the Bridge Boulevard Station are not as high as at the North Floodway Channel Station; nevertheless, analyses show several exceedances of the acute criteria for lead and zinc, as well as consistant exceedances of the acute criterion for mercury. The Bridge Boulevard samples were not analyzed for cadmium.

Many of the ambient river exceedances noted above occur upstream of the Albuquerque wastewater treatment plant and other point sources of concern discussed below. Because STORET data also show high metals concentrations in Albuquerque's drains, the metals exceedances in the Rio Grande at and below Albuquerque are currently assumed to be largely due to nonpoint sources.

This reach was also retained on the short list in order to review more intensively Albuquerque's pretreatment program as well as possible toxic impacts from the

Siemens and General Electric facility. The City of Albuquerque wastewater treatment facility is a major municipal with an industrial pretreatment program. No problems regarding toxic discharges were noted during review of this program. Siemen's NPDES permit requires monitoring for appropriate priority pollutants. Siemens had determined that these consist of 1,1,1-trichloroethane and lead. However, this facility has ceased manufacture of electronic components and is now solely an assembly facility; consequently, no priority pollutants are located on the premises. The General Electric aircraft engines facility is part of the San Jose Superfund site. Discharges from this facility consist of stormwater and parking lot runoff. Data from a report prepared for GE by a consulting firm in January 1988 indicate exceedances of EPA acute criteria for cadmium, copper, and zinc and of chronic criteria for lead and nickel in plant discharges. A requirement for development of a study, to include monthly monitoring of these parameters at all outfalls where metals exceedances have occurred, has been added to the General Electric NPDES permit. Depending upon the results of the study, this permit may be reopened to include appropriate effluent limitations and/or monitoring requirements.

This reach of the Middle Rio Grande is removed from the short list because available data do not indicate that toxic exceedances are due to point source discharges. This reach is referred to the mini list for consideration of possible nonpoint or natural sources of the toxic exceedances noted.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13030102011	**2-101**	**Rio Grande below the Las Cruces wastewater treatment facility**	**Removed**

EPA has requested that EID evaluate this reach of the lower Rio Grande for possible inclusion on the 304(l) short list due to EPA calculations indicating potential in-stream exceedances of the EPA chronic criteria for freshwater life for three toxics. These calculations are based on laboratory analyses (April 1988) which indicate exceedances of EPA chronic criteria for freshwater life for cyanide, copper, and lead concentrations in the effluent from the Las Cruces wastewater treatment facility. The calculations assume a 7Q2 critical low flow of 0.0 - i.e., the effluent receives no dilution during these periods. In addition, an earlier laboratory analysis (January 1988) of effluent from the Las Cruces Plant indicates a copper concentration which exceeds the acute criterion for freshwater life and lead and mercury concentrations above the chronic criteria. These analyses were done in connection with Las Cruces' industrial pretreatment program.

The majority of ambient data for the Rio Grande below the Las Cruces plant are eight-to-ten years old. Available quantitative data for metals and organics are sparse. These data indicate exceedances of the acute criterion for mercury. However, high levels of mercury and other metals are observed both above and below the plant. Consequently, this exceedance is believed to be caused by nonpoint sources. EID has conducted an intensive survey during 1988 to update data for the Rio Grande below Las Cruces; analysis results are not yet available.

The Rio Grande below the Las Cruces wastewater treatment plant is not included on the final 304(l) short list because metals exceedances noted from ambient data are believed to be due to nonpoint or natural sources. Metals exceedances noted or presumed in the plant effluent are apparently a result of industrial contributions to the plant and are being managed by the City of Las Cruces under EPA's NPDES Pretreatment Program. This reach is referred to the mini list for review.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13030102002	2-101	Rio Grande from below Las Cruces to the Texas border	Removed

This reach of the Rio Grande was retained on the preliminary short list pending examination of ambient data.

Two of the five identified point sources, the City of Sunland Park and the Anthony Water and Sanitation District, are minor municipal dischargers. The Gadsden Independent School District in Anthony and Los Ranchos del Rio Subdivision at Sunland Park are domestic dischargers. None of these sources receives an industrial contribution. El Paso Electric Co.-Anapra discharges cooling tower blowdown, treated sanitary wastewater, and low volume wastewater (reverse osmosis brine, demineralizer water, and evaporator blowdown). There is no indication from El Paso Electric Discharge Monitoring Reports that 307(a) toxics are being discharged.

Some ambient metals data are available from several sampling stations upstream from all listed point sources. When adjusted for hardness, no metal concentrations exceeded EPA criteria. These data are seven-to-10 years old. No ambient data are available downstream from the point sources; however, none of the point sources are expected to discharge 307(a) toxics. Although EID has conducted an intensive survey during 1988 on this entire reach, sampling results of this survey are not yet available. Biomonitoring was conducted by EPA at five stations from Las Cruces to Sunland Park in August 1988. Sediment and ambient water samples were tested by Pimephales promelas (chronic), Ceriodaphnia dubia (chronic), and Daphnia pulex (acute) bioassays. The only significant effect observed was the effect of ambient water from the Sunland Park station on Ceriodaphnia. Although the mortality observed in this sample and in the control were similar, there was a significant decrease in the total number of offspring produced compared to the control. This test result suggests a violation of the State general standard for hazardous substances, which states:

> Toxic substances ... shall not be present in receiving waters in concentrations which will change the ecological conditions of receiving waters to an extent detrimental to man or other organisms of direct or indirect commercial, recreational, or aesthetic value.

No indication was evident from the biossay results as to a possible cause of the reproduction problem although pesticides are one possibility. At the time the water and sediment samples were collected, a County truck was observed spraying

salt cedars on the opposite bank of the river with an unknown substance. Aerial spraying had recently been observed on pecan orchards upriver from this site. Water samples collected two weeks later, however, tested negative for pesticides.b/

The Rio Grande from below Las Cruces to the Texas border is removed from the 304(l) short list because ambient chemical data do not indicate toxic contamination and the only problem identified through biomonitoring is probably nonpoint in origin. EID does recommend further examination of the problem exhibited at the Sunland Park station.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13020207012	Unclassified and 2-107	Rio San Jose from Bluewater Creek to Rinconada Creek	Removed

This reach of the Rio San Jose, from Bluewater Creek to Rinconada Creek, was retained on the preliminary short list pending the examination of ambient data. The Rio San Jose is naturally ephemeral and unclassified from Bluewater Creek downstream to Horace Springs. This reach receives effluent from the Grants sewage treatment plant. Stream segment 2-107 begins about one-half mile west of the Acoma Indian Reservation, where perennial flow from Horace Springs enters the river.

Ambient data are available from sampling stations above Grants on two ephemeral tributaries, Arroyo del Puerto and San Mateo Creek. Arroyo del Puerto is a tributary to San Mateo Creek, which in turn flows into the Rio San Jose. Two point sources have active NPDES permits to discharge to Arroyo del Puerto. The United Nuclear-Homestake Mine has not discharged since 1986. Quivira's Ambrosia Lake operations (Sections 35-36 mines) discharge ion exchange water to a dry arroyo, thence to the Arroyo del Puerto. Some mine water is discharged to an overland drainage canal where it infiltrates the surface and serves to irrigate adjacent pastures. Ambient data from samples collected between 1979 and 1981 downstream from the mines show high levels of selenium (mean = 441 µg/l). More recently, Quivira's Discharge Monitoring Reports from 1986 through February 1988 record numerous selenium concentrations which exceed EPA criteria for livestock watering (50 µg/l) and for irrigation (20 µg/l), both attainable uses on this reach. Exceedances noted ranged from 42 µg/l to 745 µg/l.

One point source and one former point source with NPDES permits to discharge to San Mateo Creek have been identified. Rancher's Exploration and Development Corporation's operation has been shut down and its NPDES permit was discontinued in 1982. Quivira's Lee Mine has not discharged since at least 1980, but remains on standby status.

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b/Steven T. Pierce, EID. November 21, 1988. Personal communication.

On San Mateo Creek, ambient data from two samples collected in 1982 upstream of the mine discharges show high zinc levels (880 µg/l) which, although elevated, are not significant when compared to the EPA livestock criterion of 25 mg/l. Ambient data downstream from the mine discharges show lower zinc concentrations. Ambient data for the Rio San Jose from above and below the City of Grants' treatment plant indicate no exceedance of EPA acute criteria for freshwater life for the priority pollutants. This plant is a major municipal, but receives no significant industrial contribution.

Only limited ambient data are available for the Rio San Jose below Horace Springs. Available data do not indicate exceedances either of EPA acute criteria for priority pollutants or of the State domestic water supply standards.

The Rio San Jose and its tributaries above Horace Springs are removed from the 304(l) short list because they are ephemeral streams. However, in order to protect the attainable uses of livestock watering and irrigation on the Arroyo del Puerto, it is recommended that Quivira's Ambrosia Lake NPDES permit be reviewed to determine whether an effluent limitation for selenium is appropriate. The Rio San Jose below Horace Springs is removed from the short list because ambient data do not indicate impacts from point sources.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13020205013	Unclassified	Arroyo Chico & tributaries	Removed

Arroyo Chico, an ephemeral stream, was retained on the preliminary short list pending examination of ambient data. The one identified point source to this reach, Chevron's Mount Taylor Mine, discharges to a dry arroyo, thence to San Miguel Creek, which is a tributary to Arroyo Chico.

The few ambient data available (1978-84) do not indicate any exceedances of EPA criteria for irrigation or livestock watering. However, review of mine Discharge Monitoring Reports indicate levels of selenium which exceed the EPA criterion for livestock watering (50 µg/l), an attainable use for this reach. In ten of the last thirteen months (July 1987 through July 1988), levels of selenium have ranged from 79 µg/l through 315 µg/l.

To avoid dual permitting requirements, the monitoring requirement for selenium has been eliminated from the NPDES permit, since it is covered by the State ground water discharge plan. However, the levels of selenium in the effluent indicate that the attainable use of livestock and wildlife watering is not being fully protected and it is recommended that Chevron's Mount Taylor Mine NPDES permit be reviewed to determine whether an effluent limitation for selenium is necessary.

The Arroyo Chico, an ephemeral stream, is removed from the 304(l) short list.

Hydrologic Unit	Stream Segment	Reach	Short List Status
13020204023	Unclassified	Salado Creek and tributaries	Removed

Salado Creek, an ephemeral stream, was retained on the preliminary short list pending examination of ambient data. Ambient data collected in 1981- 82 are available from sampling stations on Marquez Creek, a tributary to Salado Creek, in the Cañon de Marquez. The stations are upstream and downstream from the two identified point sources on the reach, Quivira's Marquez Mine and Bokum's Marquez Mine. Quivira's Marquez Mine has never discharged. Bokum's mine has not discharged since at least 1982.

Ambient upstream data show copper levels in exceedance of EPA's acute criterion for aquatic life. Ambient data from one sampling station downstream of the mines show a tenfold increase in the mean levels of copper and zinc. Significant individual exceedances of EPA's acute freshwater criteria are shown for lead, copper, beryllium, chromium, and zinc. However, best professional judgment indicates that irrigation as well as livestock and wildlife watering are the only attainable uses on this reach. Lead is the only parameter which exceeds the EPA criterion for livestock watering. No EPA irrigation criteria are exceeded.

Salado Creek and its tributary, Marquez Creek, are removed from the 304(l) short list, because they are ephemeral reaches and the two mines are currently on standby status. If either point source resumes discharging, monitoring for selected metals is recommended to determine if attainable uses are protected.

Hydrologic Unit	Stream Segment	Reach	Short List Status
14080105016	2-401	San Juan River between Westwater Arroyo and Coolidge Arroyo	Removed

This reach of the San Juan River was retained on the preliminary short list pending examination of ambient data. There are three point sources with NPDES permits to discharge to this reach; these are the U.S. Bureau of Indian Affairs Nenahnezad Boarding School, the Central Consolidated Schools at Kirtland, and the Harper Valley subdivision at Kirtland. These sources are all domestic wastewater dischargers with no industrial contribution, and are not expected to discharge 307(a) toxics.

Ambient data collected near Fruitland between 1979 and 1984 show levels of cadmium, copper, and zinc which exceed the EPA acute criteria for freshwater life. However, it is not expected that these levels occur as the result of natural or nonpoint source-caused erosion of highly mineralized geologic formations in the area.

This reach of the San Juan River is removed from the 304(l) short list because ambient data do not indicate contamination from point sources, and is referred to the mini list for review.

Hydrologic Unit	Stream Segment	Reach	Short List Status
14080105001	**2-401**	**San Juan River at Bloomfield**	**Removed**

EPA has requested EID to evaluate the San Juan River below the proposed Bloomfield Refinery discharge (NPDES No. NM0029751) for possible inclusion in the 304(l) short list. This request is based on EPA's preliminary evaluation of the discharge, in accordance with Region VI's Third Round Implementation Strategy. EPA's calculations show expected arsenic concentrations in the discharge may, at low flow, result in exceedances of EPA criteria as follows:

Fish Consumption

Parameter	Criteria	Calculated In-Stream Concentration
Arsenic	0.0175 µg/l	0.02 µg/l

Fish and Water Consumption

Parameter	Criteria	Calculated In-Stream Concentration
Arsenic	0.0022 µg/l	0.02 µg/l

The calculation of the above human health criteria assume: (1) lifetime ingestion of two liters of water per day and 6.5 grams of fish/shellfish per day for ingesting water and organisms; and (2) lifetime ingestion of 6.5 grams per day of fish/shellfish for ingesting organisms only. The fish and water consumption criterion was developed by EPA's Carcinogen Assessment Group and limit risk to one in one million cancers.

This reach of the San Juan, while designated under the State Stream Standards for use as both a marginal coldwater fishery and a warmwater fishery, is not as important a fishing stream as is the high quality reach of the San Juan below Navajo Dam. Also, it is not designated for domestic water supply use. Therefore, EID considers the fish consumption and fish and water consumption criteria to be inappropriate for evaluation of this reach.

In the draft permit issued for the Bloomfield Refinery discharge, EPA has required quarterly biomonitoring for at least one year to assess the potential toxicity of the effluent. In addition, EPA has required monthly monitoring for arsenic, among other effluent consitutents. These measures will permit further evaluation of the impact of this discharge on the receiving waters.

The reach of the San Juan River below the proposed Bloomfield Refinery discharge is removed from the final 304(l) short list because EID does not consider the fish consumption and fish and water consumption criteria particularly applicable to this reach. EID notes that the U.S. Fish and Wildlife Service has expressed concern with the Bloomfield Refinery draft permit. This concern is regarding the Colorado River squawfish, which is on the federal list of endangered species and is documented as occurring in the San Juan River. EPA may need to issue a Biological Assessment prior to issuance of the permit. Further, the U.S. Fish and Wildlife Service has recommended that EPA develop a strategy to review the cumulative impacts of all permitted discharges to this river. EID concurs with this recommendation.

THE MINI LIST

The mini list identifies those waters for which a State does not expect to achieve State water quality standards for priority pollutants after technology-based requirements have been achieved, due to either point or nonpoint sources.

Development of the State final mini list. RTI did not release an official candidate mini list for New Mexico. The mini list was developed by EID by screening the 2,192 ambient monitoring stations sampled during the last ten water years for the 21 priority pollutants documented as occurring in high concentrations in New Mexico surface waters. Toxic metals were screened for both dissolved and total fractions. A significant exceedance, as defined below, of any chronic freshwater criterion by either fraction was deemed sufficient reason to include the reach on the mini list. Only quantitative values were reviewed; data coded as "K" (actual value is known to be less than value given) or "L" (actual value is known to be greater than the value given) were excluded. Corrections were made as appropriate to hardness-dependent criteria. The metals and organics screened for development of the mini list are included in Table 4.

To identify impacted reaches, criteria already developed to determine partial or nonsupport of designated uses were utilized. These criteria are taken from Table 2 of Water Quality and Water Pollution Control in New Mexico, 1988 (the 305(b) report) and from EPA's Guidance for the Preparation of the 1988 State Water Quality Assessment. These criteria are identified in Table 5.

Some reaches evaluted for inclusion on the short list were referred to the mini list for review. These reaches are included on the mini list where current available data indicate toxic exceedances.

Where information was available, background loadings--e.g., loadings at a Wilderness boundary or in other undisturbed areas--were taken into consideration. In many cases, background information was not available. Consequently, the inclusion of many reaches on the mini list may be due to background loadings rather than pollution impacts. Further monitoring and assessment work will be necessary to determine the causes of impacts to these reaches.

The mini list for New Mexico is contained in Tables 6 through 18. These tables are arranged by river basin. Within each basin, streams are listed first, and then lakes; waterbodies are listed generally in upstream to downstream order. Not all river basins in New Mexico contain waterbodies identified as impacted by priority pollutants. Data for these compounds are very limited in several of the State's basins.

Because of the importance of ephemeral streams in New Mexico, a mini list was developed for ephemeral reaches where data were available. Impacted ephemeral streams are listed by river basin in Appendix A.

Table 4. Parameters screened for development of the mini and long lists.

Parameter group	Parameter	Units	Abbreviation	STORET code(s)
State Numeric Standards				
	Water temperature	^{o}C	Temp	10
	Turbidity	TUs	Turb	70,71,75,76,82078,82079
	Conductance	umhos	Cond	94,95
	pH	SU	pH	400,403
	Dissolved oxygen	mg/l	DO	300,299
	Dissolved sodium	mg/l	Diss-Na	930
	Total chloride	mg/l	Cl^{-}	940
	Total sulfate	mg/l	SO_4	945
	Total filterable residue	mg/l	TDS	70300,70301
	Total organic carbon	mg/l	TOC	680
	Fecal coliform bacteria	#/100 ml	-	31616
	Total nitrate	mg/l as N	NO_3	620
	Total inorganic nitrogen	mg/l as N	TIN	640
	Total phosphorus	mg/l as P	TP	665
	Total chlorine residual	mg/l	Cl_2	50060
	Un-ionized ammonia	mg/l as N	NH_3	612
	Arsenic	ug/l	As	1002,1000
	Barium	ug/l	Ba	1007,1005
	Cadmium	ug/l	Cd	1027,1025
	Chromium	ug/l	Cr	1034,1030
	Lead	ug/l	Pb	1051,1049
	Silver	ug/l	Ag	1077,1075
	Selenium	ug/l	Se	1147,1145
	Mercury	ug/l	Hg	71900,71890

Table 4. Continued.

Parameter group	Parameter	Units	Abbreviation	STORET code(s)
State General Standards				
Radioactivity (section 1-102.G.)				
	Gross alpha, susp.	pc/l	Alpha	1516
	Gross beta, diss. as Cs	pc/l	Beta-D (Cs)	3515
	Gross beta, susp. as Cs	pc/l	Beta-S (Cs)	3516
	Gross beta, diss. as Sr	pc/l	Beta-D (Sr)	80050
	Gross beta, susp. as Sr	pc/l	Beta-S (Sr)	80060
	Radium-226, diss	pc/l	Ra-226	9511
Criteria for Freshwater Aquatic Life (section 1-102.F.)				
	Total cyanide	mg/l	CN	720
	Beryllium	ug/l	Be	1012,1010
	Copper	ug/l	Cu	1042,1040
	Iron	ug/l	Fe	1045,1046
	Nickel	ug/l	Ni	1067,1065
	Zinc	ug/l	Zn	1092,1090
	Benzene	ug/l	-	34030
	Polychlorinated biphenyls	ug/l	PCBs	39516
	Hexachlorobutadiene	ug/l	-	39702
	Chlordane	ug/l	-	39350
	Dieldrin	ug/l	-	39380
	Endrin	ug/l	-	39390
	Heptachlor	ug/l	-	39410

Table 5. Criteria for determination of significance of exceedances of state standards or aquatic criteria.

Assessment basis	Assessment description	Support of designated uses		
		Fully supporting	Partially supporting	Not supporting
Evaluated	No site specific data or available data more than 5 years old. Assessment based on land use, location of sources or on-site professional evaluation.	No known point or nonpoint sources are present which could interfere with the uses. Historical data indicate that criteria are met.	Sources are present which may affect uses OR no known sources exist but complaints are on record OR evaluation by professional indicates impairments OR historical data indicate criteria are violated.	Multitude or magnitude of sources indicates uses are not supported OR historical data indicate data are often or significantly violated.
Monitored (Chemistry)	Fixed station sampling, intensive surveys, or rigorous reconnaissance surveys. Chemical analysis of water, sediment or biota.	Maximum* value of any parameter <150% criterion. No criterion exceeded in >10% of current measurements AND mean values of all parameters are less than criteria. No measured 307(a)** toxic pollutantxs are at levels of concern.	Maximum* value of any parameter is >150% of criterion OR criterion for any parameter is exceeded in 11 - 25% of measurements OR mean of any parameter is > criterion. No measured 307(a)** toxic pollutants are at levels of concern.	Maximum value of two or more parameters are >150% of criteria OR criterion for any single parameter exceeded in >25% of measurements OR mean of two or more parameters exceed criteria. Any measured 307(a)** toxic pollutant is at a level of concern.

* For dissolved oxygen a minimum value of 50% of the criterion was used to determine use support instead of a maximum value.
** Includes those priority pollutants subject to effluent limitations due to their toxicity.

Table 5. Continued.

Assessment basis	Assessment description	Support of designated uses: Fully supporting	Partially supporting	Not supporting
Monitored (Biological)	Site visited by qualified biologist. Recognized bioassessment protocols used.	No evidence of modification to indigenous or established community.	Some uncertainty about use support OR some modification of community noted.	Use clearly not supported, definite modification of community noted.

Table 6. The mini list for rivers of the Rio Grande Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Rio Grande from mouth of Red River to confluence with Rio Chama	2-119 2-111	13020101	026,024,012, 008	Cu,Zn	Cd,Pb,CN
Rio Grande from confluence with Rio Chama to influent point to Cochiti Reservoir	2-111	13020101 13020201	007,005,004, 002 013,012	Cu	Cd,Pb,Hg, CN
Rio Grande from Cochiti Dam to mouth of Jemez River	2-108	13020201	010,008,007, 003,001	Cd,Cu,Pb,Zn	Hg
Rio Grande from mouth of Jemez River to Isleta Diversion Dam	2-105	13020203	016,014	Cu,Pb,Zn,Hg, Ag	Cd,Cr, Dieldrin
Rio Grande from Isleta Diversion Dam to mouth of Rio Puerco	2-105	13020203	014,010,009	-	Cu,Pb
Rio Grande from mouth of Rio Puerco to influent point to Elephant Butte Reservoir	2-105	13020203 13020211	007,005,004, 003,001 016,015,013	Cu,Zn,Hg, CN	Cd,Pb, Chlordane
Rio Grande from Elephant Butte Dam to influent point to Caballo Reservoir	2-103	13030101	011,010,009, 008,007,006	Ag	Cd,Pb
Rio Grande from Caballo Dam to Mesilla Dam	2-101	13030102	007,006,005, 004,011,002	Zn,Hg	Pb,Cd

Table 6. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Cordova Creek from Rio Costilla Ski Lodge to mouth on Costilla Creek	2-120	13020101	-	Cd	Pb
Costilla Creek from US Forest Service boundary to NM-Colorado border	2-120	13020101	035	Cd	-
Red River from Zwergle Dam to mouth of Placer Creek	2-120	13020101	028	Zn	-
Red River from mouth of Placer Creek to Molycorp Mill	2-120	13020101	028	Pb,Cu,Ag, Zn,Cd	-
Red River from Molycorp Mill to NM Red River Fish Hatchery	2-120 2-119	13020101	028,027	Cd,Cu,Pb,Zn, CN	Cr,Ni
Red River from NM Red River Fish Hatchery to mouth on Rio Grande	2-119	13020101	027	Cu,Zn,CN	Cd,Pb
Cabresto Creek from USLM No. 5 Mine to mouth on Red River	2-120	13020101	-	-	Cd
Rio Hondo from Taos Ski Valley parking area to mouth of South Fork of the Rio Hondo	2-120	13020101	025	-	Pb

Table 6. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Rio en Medio from Forest Road 101 to below Aspen Ranch	2-118	13020101	-	Cd,Cu,Pb, Ag,Zn	-
Little Tesuque Creek from USGS gage to lower US Forest Service boundary	2-118	13020101	-	-	Cd
Rio Chama from Abiquiu Dam to US Highway 84 in Abiquiu	2-113	13020102	009	-	Pb
Santa Fe River from NM Highway 22 to mouth of Cienega Creek	2-110	13020201	011	-	Pb
Santa Fe River from mouth of Cienega Creek to La Bajada Mine	2-110	13020201	011	-	Cd,Pb,Hg
Santa Fe River from La Bajada Mine to influent point to Cochiti Reservoir	2-110	13020201	011	Cd,Pb,Ag	-
Alamo Creek from NM Highway 22 to mouth on Santa Fe River	2-110	13020201	-	Cd	-
Jemez River from confluence of East Fork Jemez River with San Antonio Creek to Canon	2-106 2-105.5	13020202	010,009	-	Pb,Hg,Cu
San Antonio Creek from San Antonio Hot Springs to head of Dark Canyon	2-106	13020202	-	Cd	-

Table 6. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
San Pablo Creek from head to mouth on Rio Puerco	2-106	13020204	-	As,Pb	Cu,Hg
Rio Paguate from Jackpile Mine to Paguate Reservoir	2-106	13020207	-	Cu,Zn,Se	Cd
Rio Moquino from head to confluence with Rio Paguate	2-106	13020207	-	Cd	-
Rio San Jose from Grants to Laguna	Unclass 2-107	13020207	012,010	-	Cd
Alamosa Creek from head to influent point to Elephant Butte Reservoir	2-103	13020211	-	-	Hg
Percha Creek from head to mouth on Rio Grande	2-103	13030101	-	-	Cu

Table 7. The mini list for lakes of the Rio Grande Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Latir Lakes	Unclass	13020101	-	Ag	Cd
Ice Cave Pond	Unclass	13020206	-	Cu	-
Elephant Butte Reservoir	2-104	13020211	001	-	Cd,Pb,Zn, Hg

Table 8. The mini list for rivers of the Pecos River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Pecos River from mouth of Jacks Creek to mouth of Willow Creek	2-214	13060001	023,022, 020	-	Hg
Pecos River from mouth of Willow Creek to mouth of Dalton Canyon	2-214	13060001	020	Zn	Pb, Hg
Pecos River from mouth of Esteros Creek to Boriva Draw	2-211	13060001	013,012, 010	Cu	Cd, Pb, Hg
Pecos River from Sumner Dam to Yeso Creek	2-207	13060003	015,014, 012,010	Hg	Cd, Pb
Pecos River from Acme to Artesia	2-206	13060007	008,007,006, 004,003,002, 001	-	Hg
Pecos River from Pierce Canyon Crossing to influent point at Red Bluff Reservoir	2-201	13060011 13070001	001 010	Hg	Se, Be, Cd, Benzene, PCBs, Hexachloro-butadiene
Willow Creek in the drainage of the Terrero Mine	2-214	13060001	-	Cd, Cu	Pb
Holy Ghost Creek from Doctor Creek to mouth on Pecos River	2-214	13060001	-	Zn	Cu, Hg
Indian Creek from US Forest Service boundary to mouth on Pecos River	2-214	13060001	-	-	Hg

Table 8. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Tecolote Creek from mouth of Wright Canyon to US Forest Service boundary	2-212	13060001	-	Zn	-

Table 9. The mini list for lakes of the Pecos River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
McAllister Lake	2-211.3	13060001	-	-	Hg
Storrie Lake	2-211.5	13060001	-	Pb	-

Table 10. The mini list for rivers of the Canadian River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Canadian River from mouth of Carrizo Creek to influent point to Conchas Reservoir	2-305	11080003	010,009,008	Zn	Cd,Hg, PCBs
Canadian River from mouth of Revuelto Creek to NM-Texas border	2-301	11090101	014,012,010, 009,007,006, 004,002,001	-	Hg
Hunter Creek from head to influent point to Throttle Dam	2-306	11080001	-	-	Hg
Raton Creek from head to mouth on Chicorica Creek	2-306 2-305	11080001	008	-	Hg
Blosser Arroyo from head to mouth on Una de Gato Creek	2-305	11080001	-	Hg	-
Una de Gato Creek from head to confluence with Chicorica Creek	2-306 2-305	11080001	006	-	Cd,Hg
Vermejo River from mouth of York Canyon to confluence with Canadian River	2-306 2-305	11080001	011	-	Cd,Hg
Cieneguilla Creek from County Road B-15 to influent point to Eagle Nest Reservoir	2-306	11080002	-	-	Pb

Table 10. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Cimarron River from Eagle Nest Dam to mouth of North Ponil Creek	2-306	11080002	003	Cd	Pb
Rayado Creek from head to mouth on Cimarron River	2-306 2-305	11080002	-	-	Pb
Mora River from mouth of Wolf Creek to mouth of Pedroso Creek	2-305.3	11080004	002	-	Pb
Sapello River from US Forest Service boundary to mouth on Mora River	2-306 2-305.3	11080004	019,015,012	-	Pb,Hg

Table 11. The mini list for lakes of the Canadian River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Maxwell Lake 13	Unclass	11080001	-	-	Cd
Clayton Lake	Unclass	11100101	-	-	Cd,Pb
Ute Reservoir	2-302	11080006	005	Cd,Pb	Cu

Table 12. The mini list for rivers of the San Juan Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
San Juan River from Gobernador Canyon to Canon Largo	2-405 2-401	14080101	006	Cd,Cu	Pb,Hg
San Juan River from Canon Largo to Westwater Arroyo	2-401	14080101 14080105	005,003,001 019,018,017, 016	Cu,Zn,Cd	Be,Pb,Hg
San Juan River from Westwater Arroyo to NM-Colorado border	2-401	14080105	015,014,013, 011,009,008, 007,003,001	Cd,Cu,Zn, CN	Be,Pb,Ag,Hg, Dieldrin, Endrin, PCBs, Hexachloro-butadiene
Animas River from NM-Colorado border to confluence with San Juan River	2-404 2-403	14080104	001	Cu,Zn,Cr	Cd,Pb,Hg
La Plata River from NM-Colorado border to confluence with the San Juan River	2-402	14080105	026,024,023	Cu,Zn	Be,Pb,Hg
Chaco River from Chinle Wash to mouth on San Juan River	2-401	14080106	003,001	Cu,Zn	Se,Hg

Table 13. The mini list for rivers of the Gila River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Gila River from mouth of Mangas Creek to NM-Arizona border	2-501	15040002	005,004	Cu,Pb,Zn, Hg	Cd,CN
Gilita Creek from Forest Road 119 to mouth of Turkey Creek	2-503	15040001	-	Cu	-
Willow Creek from Gila Wilderness boundary to Willow Creek Campground	2-503	15040001	-	Cu	-
Gallinas Creek from head to mouth on Black Canyon	2-503	13030202	-	Cu	-
Sapillo Creek from NM Highway 15 to mouth on Gila River	2-503	15040001	003	Cu	-
Mogollon Creek from Gila Wilderness boundary to mouth on Gila River	2-503	15040001	002	Cd,Cu,Pb, Ag	-
Mangas Creek from Schoolhouse Canyon to mouth on Gila River	2-502	15040002	006	Cu	Pb,Hg

Table 14. The mini list for lakes of the Gila River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Wall Lake	Unclass	15040001	-	Cu	-
Lake Roberts	Unclass	15040001	-	Cu	-

Table 15. The mini list for rivers of the San Francisco River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
San Francisco River from Reserve to mouth of Deep Creek	2-601	15040004	023,013, 012,010	Cu	-
Centerfire Creek from Minor Point to mouth of SA Creek	2-603	15040004	-	Cu	-
South Fork Negrito Creek from head to confluence with North Fork Negrito Creek	2-603	15040004	016	Cu	-
Mule Creek from head to mouth	2-601	15040004	-	-	Pb

Table 16. The mini list for rivers of the Dry Cimarron Sub-basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Oak Creek from head to mouth on Dry Cimarron River	2-7Ø1	11Ø4ØØØ1	Ø18	-	Cd
Carrizozo Creek from head to mouth on Dry Cimarron River	2-7Ø1	11Ø4ØØØ1	Ø25,Ø24	-	Pb

Table 17. The mini list for rivers of the Central Closed Basins.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Tularosa Creek from head to Bent	2-801	13050003	009	-	Hg

Table 18. The mini list for rivers of the Southwestern Closed Basins.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Mimbres River from McKnight Canyon to Mimbres	2-804	13030202	003	Cd,Hg	Cu,Pb

THE LONG LIST

The long list identifies all perennial waters impacted by point or nonpoint source discharges of toxic, conventional, and nonconventional pollutants.

Development of the State final long list. The mini list, which identifies those reaches in New Mexico impacted by priority pollutants, is contained in the long list by reference. The remainder of the long list was developed by evaluating the impacts of conventional and nonconventional pollutants to the State's perennial reaches. The 2,192 ambient monitoring stations sampled during the last ten water years were screened, on a segment-by-segment basis, for significant violations of the State's numeric and narrative water quality standards. The conventional and nonconventional parameters screened for development of the long list are included in Table 4. The criteria developed to determine partial or nonsupport of designated uses are identified in Table 5.

Reaches contained in the candidate long list developed by RTI were reviewed for inclusion on the State's final long list. Most of the RTI reaches were retained on the final list. Reasons for removal were:

1) Stream is ephemeral;
2) Wrong stream was identified;
3) Ambient data used by RTI predate 1977;
4) Impacts are due to diversion of waters or dewatering of streams due to impoundment.

Tables 19 through 33 contain the final long list for New Mexico for conventional and nonconventional parameters. Reaches impacted by total chlorine residual and un-ionized ammonia exceedances are listed in Appendix B. These two tables are also part of the final long list.

Table 19. Long list for rivers of the Rio Grande River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Rio Grande from mouth of Red River to Pilar	2-119 2-111	13020101	026,024, 012	Turb,Hazardous Substances
Rio Grande from confluence with Rio Chama to influent point to Cochiti Reservoir	2-111	13020201	013	Turb,pH,Hazardous Substances
Rio Grande from Bernalillo to Isleta Indian Reservation	2-105	13020203	016,014	Fecal Coliform Bacteria, Hazardous Substances
Rio Grande from mouth of Rio Puerco to influent point to Elephant Butte Reservoir	2-105	13020203 13020211	007,005, 004,003, 001 016,015, 013	Stream Bottom Deposits, Hazardous Substances
Rio Grande from Elephant Butte Dam to influent point to Caballo Reservoir	2-103	13020211 13030101	011 011,010, 009	DO,pH,Hazardous Substances
Rio Grande from Dona Ana to downstream of village of Mesilla	2-101	13030102	011,002	Fecal Coliform Bacteria, Hazardous Substances
Comanche Creek from head to mouth on Costilla Creek	2-120	13020101	033	Turb, NH3
Cordova Creek from ski lodge to mouth on Costilla Creek	2-120	13020101	-	Turb, TP, Stream Bottom Deposits, Hazardous Substances
Costilla Creek from mouth of Cordova Creek to NM-Colorado border	2-120	13020101	035	Turb, Stream Bottom Deposits,Hazardous Substances
Ute Creek within the village of Amalia	2-120	13020101	-	TP
Red River from Elephant Rock Campground to 1-1/2 miles above the NM Red River Fish Hatchery	2-120	13020101	028,027	Turb,Cond,TP, TOC,Cr,Pb,pH, Hazardous Substances
Red River from 1-1/2 miles above the NM Red River Fish Hatchery to mouth on the Rio Grande	2-119	13020101	027	Turb,Stream Bottom Deposits,Hazardous Substances

Table 19. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Rio Hondo from Taos Ski Valley parking area to USGS gage near Valdez	2-120	13020101	025	pH,TP,Turb,TIN,Cl2, Fecal Coliform Bacteria, Oil and Grease,Hazardous Substances
Rio Fernando de Taos from confluence of Tienditas Creek to mouth on Rio Grande	2-120	13020101	021,020	Turb,Floating Solids, Oil and Grease,Stream Bottom Deposits
Rio Pueblo from NM Highway 3 to NM Highway 75	2-120	13020101	011	Turb,NH3
Rio Pueblo de Taos from Taos WWTP to mouth on Rio Grande	2-119	13020101	013	Temp, NH3, Fecal Coliform Bacteria
Big Tesuque Creek from US Forest Service campground to confluence with Little Tesuque	2-118	13020101	-	pH
Rio en Medio from Santa Fe Ski Basin maintenance shop to below Aspen Ranch	2-118	13020101	-	pH,TIN,TP,Turb, Hazardous Substances
Rio Chama from 2 miles upstream of Chama to mouth of Rito de Tierra Amarilla	2-116	13020102	039,038, 034	TP,TOC,Cl2,NH3
Rio Chamita from 2 miles upstream of NM Highway 96 to mouth on Rio Chama	2-116	13020102	040	Temp,Turb,NH3, TIN,TP,Cl2, Fecal Coliform Bacteria
Rio Brazos from Rio Brazos Lodge to mouth on Rio Chama	2-116	13020102	035	Temp,Turb, Stream Bottom Deposits
Rito de Canjilon from uppermost crossing of Forest Road 110 to influent point to Abiquiu Reservoir	2-116	13020102	018	Stream Bottom Deposits
Rito Resumidero from border San Pedro Parks Wilderness to mouth on Rio Puerco de Chama	2-116	13020102	-	TOC,NH3, Stream Bottom Deposits
Rio Puerco de Chama from 1 mile above Forest Road 93 to the Rio Puerco Campground	2-116	13020102	-	NH3, Stream Bottom Deposits

Table 19. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Rito Redondo from border of San Pedro Parks Wilderness to mouth on Rio Puerco de Chama	2-116	13020102	-	TOC,Stream Bottom Deposits
Rio Chama from Abiquiu Dam to US Highway 84 in Abiquiu	2-113	13020102	009	Stream Bottom Deposits, Turb,Hazardous Substances, DO
El Rito Creek from El Rito to mouth on Rio Cha,a	2-113	13020102	007	Hazardous Substances
Rio Ojo Caliente from Ojo Caliente to mouth on Rio Chama	2-113	13020102	002	Hazardous Substances
Santa Fe River from Santa Fe WWTP to influent point to Cochiti Reservoir	2-110	13020201	011	pH,DO,Turb, Fecal Coliform Bacteria, Hazardous Substances, Stream Bottom Deposits, Radioactivity
Cienega Creek from Cienega to mouth on Santa Fe River	2-110	13020201	-	Hazardous Substances
Las Huertas Creek from Capulin Canyon to village of Placitas	2-108.5	13020201	002	Stream Bottom Deposits
Rio San Jose from Grants WWTP to Horace Springs	Unclassified	13020207	012	Hazardous Substances
Rio San Jose from Horace Springs to USGS gage at Correo	2-108	13020207	012,010	Temp,DO,TP,TIN,NH3, Cl2,Turb,Stream Bottom Deposits,Hazardous Substances
Bluewater Creek from head to influent point to Bluewater Reservoir	2-106	13020207	014	Stream Bottom Deposits
Bluewater Creek from Bluewater Dam to confluence with Rio San Jose	2-106	13020207	014	Cond,TP,TOC
Rio Paguate from head to mouth of Paguate Reservoir	2-106	13020207	-	Temp,Cond,Stream Bottom Deposits,Radioactivity, Hazardous Substances

Table 19. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Rio Moquino from head to mouth on Rio Paguate	2-106	13020207	-	Temp,Cond,Stream Bottom Deposits,Radioactivity, Hazardous Substances
Perennial reaches of San Pablo Creek	2-106	13020204	-	Turb,Cond,TP,As,Ba, Pb,Hazardous Substances
Rio Puerco from the San Pedro Parks Wilderness to Cuba	2-106	13020204	019,017, 015,014	Temp,Cond,Stream Bottom Deposits
Rio Guadalupe from head to confluence with the Jemez River	2-106	13020202	011	Turb,Cond,TP, Fecal Coliform Bacteria, Stream Bottom Deposits
Rio de las Vacas from Forest Road 94 to confluence with Rio Cebolla	2-106	13020202	013	Stream Bottom Deposits
Cebolla Creek from NM Seven Springs Fish Hatchery to confluence with Rio de las Vacas	2-106	13020202	012	TIN,TP, Stream Bottom Deposits
Sulphur Creek from head to mouth on Redondo Creek	2-106	13020202	-	Temp,Cond,DO, pH
Redondo Creek from head to mouth on San Antonio Creek	2-106	13020202	-	TP, Fecal Coliform Bacteria
Jemez River from confluence East Fork Jemez and San Antonio Creek to Jemez Ranger Station	2-106	13020202	010	Temp,Turb,Cond,TP,As, Stream Bottom Deposits, Hazardous Substances
East Fork Jemez River from head to Jemez Falls	2-106	13020202	010	Temp,NH3
San Antonio Creek from San Antonio Hot Springs to confluence with East Fork Jemez River	2-106	13020202	-	Turb,Temp,TP, DO,Cd
Vallecito Creek from Ponderosa to mouth on Jemez River	2-106	13020202	008	Temp,Cond,TP, TIN,NH3, Stream Bottom Deposits
Jemez River from Jemez Springs to mouth of Vallecito Creek	2-105.5 Unclass	13020202	010,009	Turb,Cl2, Stream Bottom Deposits

Table 20. Long list for lakes of the Rio Grande Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Goose Lake	2-120	13020101	-	Plant Nutrients
Hopewell Lake	2-112	13020102	-	pH,Stream Bottom Deposits,DO,Turb, Nuisance Algae
El Vado Lake	2-117	13020102	027,028, 029,030	Stream Bottom Deposits, Nuisance Algae,Plant Nutrients
Abiquiu Reservoir	2-114	13020102	011,012, 013,014, 015	Stream Bottom Deposits, DO
Fenton Lake	2-106	13020202	-	Stream Bottom Deposits, Nuisance Algae,TP
South Arm Bluewater Lake	2-106	13020207	-	Turb,Stream Bottom Deposits,Plant Nutrients
Caballo Reservoir	2-102	13030101	002,003, 004,005, 030	Stream Bottom Deposits, Plant Nutrients

Table 21. Long list for rivers of the Pecos River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Pecos River from outflow Bitter Lakes National Wildlife Refuge to US Highway 82 east of Artesia	2-206	13060007	007,006, 004,003, 002	DO,Hazardous Substances, Stream Bottom Deposits, Fecal Coliform Bacteria
Pecos River from Lower Tansil Dam to USGS Malaga gaging station	2-202	13060011	004	Fecal Coliform Bacteria
Pecos River from USGS Malaga gaging station to USGS Red Bluff gaging station	2-201	13060011 13070001	002,001 010	pH
Willow Creek within and below the Terrero Mine	2-214	13060001	-	TP,Cd,Stream Bottom Deposits,Hazardous Substances
Tecolote Creek from mouth of Blue Creek to Lagunita	2-212	13060001	-	Temp,Turb,Cond,TP, Hazardous Substances
Gallinas River from Burro Canyon to Montezuma	2-212, Unclas-sified	13060001	014	Temp,Turb, TP
Porvenir Creek from US Forest Service campground to mouth on Gallinas Creek	2-212	13060001	-	Temp,Turb
Gallinas River from the City of Las Vegas WWTP to San Augustin	Unclas-sified	13060001	014	Hazardous Substances
Rio Ruidoso from Mescalero Apache Reservation to site of old Ruidoso WWTP	2-209	13060008	020	Temp,Turb,TOC, TP,Fecal Coliform Bacteria,NH3
Rio Ruidoso from Seeping Springs Lake to confluence with Eagle Creek	2-208	13060008	020	Fecal Coliform Bacteria,Plant Nutrients
Rio Bonito from Lincoln to mouth on Rio Hondo	2-208	13060008	-	Fecal Coliform Bacteria
Rio Hondo from head to Picacho	2-208	13060008	014	Fecal Coliform Bacteria

Table 22. Long list for lakes of the Pecos River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
McAllister Lake	2-211.3	13060001	-	Plant Nutrients,Stream Bottom Deposits,Hazardous Substances,Nuisance Algae
Alamogordo Reservoir	2-210	13060001	002,003, 004	Plant Nutrients, Nuisance Algae
Alto Lake	2-209	13060008	-	Turb,Plant Nutrients, Nuisance Algae,DO
Bonito Lake	2-209	13060008	-	pH,DO,Turb,Plant Nutrients,Nuisance Algae,Stream Bottom Deposits
Lake McMillan *	2-205	13060011	007,008 009,010	Plant Nutrients, Nuisance Algae, Stream Bottom Deposits

* McMillan Dam is scheduled to be breached in June of 1989.
This structure is being replaced by Brantley Dam which began filling in July 1988.

Table 23. Long list for rivers of the Canadian River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Canadian River from mouth of Vermejo River to US Highway 56	2-306	11080001	003,001	Temp,Cond, Fecal Coliform Bacteria
Canadian River from mouth of Carrizo to influent point to Conchas Reservoir	2-305	11080003	008	pH,Hazardous Substances
Vermejo River from mouth of York Canyon to Dawson	2-306	11080001	011	Temp,Cond,Hazardous Substances
Una de Gato Creek from Throttle Dam to US Highway 64	2-306	11080001	006	Temp,Cond,TIN, Hazardous Substances
Una de Gato Creek from US Highway 64 to mouth on Chicorica Creek	2-305	11080001	006	Stream Bottom Deposits
Hunter Creek from head to mouth on Raton Creek	2-306	11080001	-	Cond,Hazardous Substances
Raton Creek from Raton to confluence with Chicorica Creek	2-306, 2-305	11080001	009	Temp,Cond,TIN,NH3, Hazardous Substances
Cieneguilla Creek from County Road B-15 to influent point to Eagle Nest Lake	2-306	11080002	-	Fecal Coliform Bacteria, Hazardous Substances
Six-Mile Creek from head to influent point to Eagle Nest Lake	2-306	11080002	-	Fecal Coliform Bacteria
Moreno Creek from head to influent point to Eagle Nest Lake	2-306	11080002	-	Fecal Coliform Bacteria
Cimarron River from Eagle Nest Dam to Cimarron	2-306	11080002	003	pH,TP,TOC, Hazardous Substances
North Ponil Creek from mouth of McCrystal Creek to US Forest Service boundary	2-306	11080002	002	Temp,Stream Bottom Deposits
Middle Ponil Creek from headwaters to confluence with South Ponil Creek	2-306	11080002	-	Plant Nutrients, Stream Bottom Deposits

Table 23. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Rayado Creek from confluence with Urraca Creek to Miami Lake diversion	2-306	11080002	-	DO, pH, Hazardous Substances
Rayado Creek from Miami Lake diversion to mouth on Cimarron River	2-305.3	11080002	-	Fecal Coliform Bacteria
Mora River from head to Mora	2-306	11080004	009	Turb, TP
Mora River from Mora WWTP to mouth on Canadian River	2-305.3	11080004	002	NH3, Hazardous Substances
La Casa Creek from US Forest Service boundary to mouth on Mora River	2-306	11080004	-	Stream Bottom Deposits
Coyote Creek from Coyote Creek State Park to mouth on Mora River	2-306	11080004	006	Temp, Turb, TP, NH3, Fecal Coliform Bacteria
Pajarito Creek at mouth on Canadian river	2-303	11080006	-	Hazardous Substances
Revuelto Creek at mouth on Canadian River	2-301	11080008	001	Temp, DO

Table 24. Long list for lakes of the Canadian River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Lake Maloya	Unclassified	11080001	-	Plant Nutrients, Nuisance Algae
Eagle Nest Lake	2-306	11080002	004	Plant Nutrients, Nuisance Algae, Stream Bottom Deposits
Morphy Lake	2-306	11080004	-	Plant Nutrients,pH,DO, Stream Bottom Deposits
Lower Charette Lake	Unclassified	11080003	-	Plant Nutrients, Stream Bottom Deposits, Temp
Maxwell Lake #12	Unclassified	11080001	-	Plant Nutrients, Stream Bottom Deposits
Maxwell Lake #13	Unclassified	11080001	-	Plant Nutrients, Stream Bottom Deposits, Hazardous Substances
Maxwell Lake #14	Unclassified	11080001	-	Plant Nutrients, Stream Bottom Deposits
Stubblefield Reservoir	Unclassified	11080001	-	Plant Nutrients, Stream Bottom Deposits
Laguna Madre	Unclassified	11080001	-	Plant Nutrients, Stream Bottom Deposits
Conchas Reservoir	2-304	11080003 11080005	003,004, 002 002,003, 004,005, 006	Plant Nutrients

Table 25. Long list for rivers of the San Juan River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
San Juan River from Gobernador Canyon to Canon Largo	2-405	14080101	006	Turb,TP, Hazardous Substances
San Juan River from Bloomfield to Waterflow	2-401	14080101	005,003, 001	Hazardous Substances
		14080105	019,018, 017,016, 015	
La Plata River from the NM-Colorado border to confluence with the San Juan River	2-402	14080105	026,024, 023	Stream Bottom Deposits, Plant Nutrients, Hazardous Substances
Chaco River at mouth	2-401	14080106	001	pH,Hazardous Substances,Stream Bottom Deposits

Table 26. Long list for lakes of the San Juan River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Jackson Lake	Unclassified	14080105	-	Plant Nutrients

Table 27. Long list for rivers of the Gila River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Middle Fork Gila River from Ranger Station to confluence with East Fork Gila River	2-503	15040001	015	Temp,NH3
East Fork Gila River from mouth of Black Canyon to mainstem of Gila River	2-503	15040001	005	pH,NH3
Gila River from mouth of East Fork to mouth of Sapillo Creek	2-502	15040001	004	Temp
Willow Creek from Willow Creek campground to Forest Road 28	2-503	15040001	-	Fecal Coliform Bacteria
Sapillo Creek from Lake Roberts to mouth on Gila River	2-503	15040001	003	DO,TP, Hazardous Substances
Mogollon Creek from Gila Wilderness to mouth on Gila River	2-503	15040001	020	Temp,pH, Hazardous Substances
Mangas Creek from mouth of Cottonwood Canyon to mouth on Gila River	2-502	15040002	006	Temp,pH, Hazardous Substances

Table 28. Long list for lakes of the Gila River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Lake Roberts	Unclassified	15040001	-	Plant Nutrients, Nuisance Algae, Stream Bottom Deposits, Hazardous Substances
Snow Lake	2-503	15040001	-	Plant Nutrients, Nuisance Algae, Stream Bottom Deposits
Wall Lake	2-503	15040001	-	Plant Nutrients, DO, Nuisance Algae, Stream Bottom Deposits, Hazardous Substances

Table 29. Long list for lakes of the Lower Colorado River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Quemado Lake	Unclas-sified	15020003	-	Plant Nutrients, Stream Bottom Deposits, Nuisance Algae
McGaffey Lake	Unclas-sified	15020004	-	Plant Nutrients, Nuisance Algae, Stream Bottom Deposits, pH

Table 30. Long list for rivers of the San Francisco River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
San Francisco River from Arizona-NM border to mouth of Tularosa River	2-602	15040004	023	Temp,pH,NH3
Centerfire Creek from Bishop Canyon to mouth on San Francisco River	2-603	15040004	-	Temp,Turb,Cond,DO, Hazardous Substances
Tularosa River from mouth of Apache Creek to mouth on San Francisco River	2-603	15040004	018,014	Temp,Cond,Turb, NH3,Fecal Coliform Bacteria
Negrito Creek from Cerco Canyon to mouth on Tularosa River	2-603	15040004	015	Temp,Turb,DO, TP
Whitewater Creek from Whitewater Campground to mouth on San Francisco River	2-603	15040004	007,005	Turb,TP, Fecal Coliform Bacteria
Mineral Creek from Red Canyon to mouth on San Francisco River	2-603	15040004	009	Temp,Turb
San Francisco River from Glenwood to mouth of Dry Springs	2-601	15040004	004	pH

Table 31. Long list for rivers of the Central Closed Basins.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Three Rivers from County Road A-30 to US Highway 54	2-802	13050003	-	Temp,Cond,TP

Table 32. Long list for rivers of the Southwestern Closed Basins.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Mimbres River from McKnight Canyon to Mimbres	2-804	13030202	003	Temp,Turb,Cond,DO,TP, Stream Bottom Deposits, Hazardous Substances

Table 33. Long list for lakes of the Southwestern Closed Basins.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Standards Violations
Bear Canyon Reservoir	2-804	13030202	-	Plant Nutrients,DO, Stream Bottom Deposits

APPENDIX A

MINI LIST: EPHEMERAL STREAMS

Table A-1. The mini list for ephemeral stream reaches in the Rio Grande Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Santa Fe River in the City of Santa Fe	13020201	011	Pb	Hg
Taylor Ranch Drain near Albuquerque	13020203	-	Pb	Cu, Chlordane, Heptachlor
North Floodway Channel near Alameda	13020203	-	Cu, Pb, Zn, Hg	Cd, Cr
Hahn Arroyo near Albuquerque	13020203	-	Pb, Zn	Cd, Cu
Tijeras Arroyo from Tijeras to mouth on Rio Grande	13020203	015	Pb	Ag
Arroyo Chico from head to mouth on Rio Puerco	13020205	016, 015, 014, 013, 011, 001	-	Cd, Cu, Pb, Se
Papers Wash from head to mouth on Arroyo Chico	13020205	-	-	Hg
Marquez Creek from Bokum Mine to mouth on Salado Creek	13020204	-	Cu, Pb, Be, Cr, Ni, Zn	Cd, Hg
Rio San Jose and tributaries from Bluewater Creek to Grants	13020207	012	Se	-
Rio San Jose in and below Grants to Horace Springs	13020207	012	-	Pb, Hg

Table A-1. Continued.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Poison Canyon from head to mouth on Rio San Jose	13020207	-	As,Cd,Pb, Zn	-
San Mateo Creek from Johnny M Mine to mouth on Rio San Jose	13020207	-	As,Cd,Pb, Zn,Se	-
Puertocito Creek from head to mouth on Rio San Jose	13020207	-	Se	-
Arroyo del Puerto from head to mouth on Rio San Jose	13020207	-	Se	-

Table A-2. The mini list for ephemeral stream reaches in the Canadian River Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Perico Creek from head to mouth on the West Rita Blanca	11Ø9Ø1Ø3	Ø1Ø	-	Pb

Table A-3. The mini list for ephemeral stream reaches in the San Juan River Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Canon Largo from head to mouth on San Juan River	14080103	005,004,003, 001	As,Cu,Pb, Ni,Zn,Hg	Be,Cd,Cr
Gallegos Canyon from head to mouth on San Juan River	14080101	004	Cu,Pb,Zn, Hg	Be,Cd
Shumway Arroyo from head to mouth on San Juan River	14080105	-	Pb,Se	Cd,Cu,Zn, Hg
Westwater Arroyo from head to mouth on San Juan River	14080105	037	As,Pb	Hg
Stevens Arroyo from head to mouth on San Juan River	14080105	-	-	Pb
Chaco Wash from Chaco National Monument to Chinle Wash	14080106	030,028,027, 025,024,023, 021,019,017, 016,014,013, 005,004,003, 001	Cu,Pb,Ni, Zn,Hg	Be,Cd,Cr
Escavado Wash from head to mouth on Chaco Wash	14080106	034	Cd,Pb	Hg
Gallo Wash from head to mouth on Chaco Wash	14080106	-	Pb	-
Burnham Wash from head to mouth on Chaco Wash	14080106	-	As,Cu,Pb, Hg	Be,Cd,Zn

Table A-3. Continued.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Tec-Ni-Di-Tso Wash from head to mouth on Chaco Wash	14080106	-	Pb,Zn	Be,Cu,Hg
Kimberto Wash from head to mouth on Chaco Wash	14080106	035	Pb	-
Kim-Me-Ni-Oli Wash from head to mouth on Chaco Wash	14080106	026	Cu,Pb,Zn	Ag,Hg
Ah-Shi-Sle-Pah Wash from head to mouth on Chaco Wash	14080106	-	Cu,Pb,Zn, Hg	Be,Cd
De-Na-Zin Wash from head to mouth on Chaco Wash	14080106	038,037	Cd,Cu,Pb, Zn,Hg	Be,Cr
Alamo Wash from head to mouth on Chaco Wash	14080106	039	Pb	-
Hunter Wash from head to mouth on Chaco Wash	14080106	040	Pb,Cu,Zn, Hg	As,Be,Cd

Table A-4. The mini list for ephemeral stream reaches in the Gila River Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Bear Creek from Mill Creek to Pinos Altos	15040002	-	Cu,Pb,Zn	Cd

Table A-5. The mini list for ephemeral stream reaches in the San Francisco River Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Silver Creek from Little Fannie Hill Mine to Bluebird Gulch	15040004	-	CN	-

Table A-6. The mini list for ephemeral stream reaches in the Lower Colorado River Basin.

Waterbody	Hydrologic Unit Code	EPA Reach(s)	Acute	Chronic
Puerco River from NM Highway 56 to mouth of North Fork Puerco River	15020006	007	Zn	Cd,Se,Pb
Puerco River from mouth of North Fork Puerco River to NM-Arizona border	15020006	007,005, 003	Cu,Pb,Zn, Se	Hg
North Fork Puerco River	15020006	-	As,Cd,Pb, Zn	Se,Hg
Pipeline Wash from United Nuclear Mill to mouth on North Fork Puerco River	15020006	-	Se	Pb
Rio Nutria from head to confluence with Zuni River	15020004	010	-	Cd,Cu,Pb
Zuni River from mouth of Rio Nutria to Black Rock Reservoir	15020004	006	-	Cd,Cu

APPENDIX B

REACHES IMPACTED BY

TOTAL CHLORINE RESIDUAL
AND
UN-IONIZED AMMONIA

Table B-1. Total chlorine residual and un-ionized ammonia exceedances for rivers of the Rio Grande Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Total Chlorine Residual		Un-ionized Ammonia	
				Acute	Chronic	Acute	Chronic
Rio Grande from Bernalillo to North Floodway Channel	2-105	13020203	016				X
Rio Grande from Central Avenue Bridge in Albuquerque to Isleta Diversion Dam	2-105	13020203	016	X		X	
Rio Grande from La Joya to influent point to Elephant Butte Reservoir	2-105	13020203 13020211	005,004, 003,001, 016,015, 013,012				X
Rio Grande from Elephant Butte Dam to influent point to Caballo Reservoir	2-103	13030101	011				X
Rio Pueblo from Sipapu Ski Area to confluence with Rio Santa Barbara	2-120	13020101	010				X
Rio Chamita from NM Highway 29 to Chama WWTP	2-116	13020102	040				X
Rio Chamita from Chama WWTP to mouth on Rio Chama	2-116	13020102	040	X		X	
Rio Chama from mouth of Rio Chamita to mouth of Rio Brazos	2-116	13020102	038	X			X
Rito Rusumidero from border San Pedro Parks Wilderness to mouth on Rio Puerco de Chama	2-116	13020102	-				X
Rio Puerco de Chama from mouth of Rito Rusumidero to USFS Rio Puerco campground	2-116	13020102	-				X

Table B-1. Continued.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Total Chlorine Residual Acute	Total Chlorine Residual Chronic	Un-ionized Ammonia Acute	Un-ionized Ammonia Chronic
El Rito Creek from El Rito to mouth on Rio Chama	2-113	13020102	007				X
Rio Ojo Caliente from Ojo Caliente to mouth on Rio Chama	2-113	13020102	002				X
Santa Fe River from Santa Fe WWTP to influent point to Cochiti Reservoir	2-110	13020201	011	X		X	
Cienega Creek from Cienega to mouth on Santa Fe River	2-110	13020201	-				X
Vallecito Creek from Ponderosa to mouth on Jemez River	2-106	13020202	008				X
Jemez River from Jemez Springs WWTP to mouth of Vallecito Creek	2-105.5	13020202	009	X			
Rio San Jose from Grants WWTP to Seama Bridge on Laguna Indian Reservation	Unclassified, 2-107	13020207	012,010		X		X

Table B-2. Total chlorine residual and un-ionized ammonia exceedances for rivers of the Pecos River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Total Chlorine Residual Acute	Total Chlorine Residual Chronic	Un-ionized Ammonia Acute	Un-ionized Ammonia Chronic
Pecos River from outflow Bitter Lakes National Wildlife Refuge to US Highway 82 east of Artesia	2-206	13060007	007,006, 004,003, 002			X	
Gallinas River from Las Vegas WWTP to San Augustin	Unclas-sified	13060001	014	X			X
Tecolote Creek from mouth of Blue Creek to Lagunita	2-212	13060001	-				X

Table B-3. Total chlorine residual and un-ionized ammonia exceedances for rivers of the Canadian River Basin.

Waterbody	WQCC Segment	Hydrologic Unit Code	EPA Reach(s)	Total Chlorine Residual		Un-ionized Ammonia	
				Acute	Chronic	Acute	Chronic
Canadian River from mouth of Carrizo Creek to influent point to Conchas Reservoir	2-305	11080003	008				X
Mora River from Mora WWTP to Shoemaker	2-305.3	11080004	002				X
Pajarito Creek at mouth on Canadian River	2-303	11080006	-				X
Revuelto Creek at mouth on Canadian River	2-301	11080008	001				X

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CARLA L. MUTH
Deputy Secretary

August 22, 1988

Ms. Glenda Malott
NM Projects Coordinator
U.S. Environmental Protection Agency
1445 Ross Avenue, Suite 1200
Dallas, Texas 75202-2733

Dear Ms. Malott:

I am pleased to report completion of the State preliminary short, mini, and long lists required under Section 304(l) of the federal Clean Water Act. Five copies of our report on these lists are enclosed. Work on finalizing these lists is underway.

Please call me if you have any questions regarding this report.

Sincerely,

Jim Piatt
Program Manager
Water Quality Planning Section
Surface Water Quality Bureau

JP/SK/mlt

Enclosures

Toxic Pollution of Surface Waters: Preliminary Lists of Waters Impacted by Toxic Pollutants

The 1987 amendments to the federal Clean Water Act (CWA) require an increased emphasis on the identification and control of toxic pollutants in surface waters. Specifically, Section 304(l) was added to the act and requires development of lists of waters impaired by conventional, toxic, or nonconventional pollutants from both point and nonpoint sources; identification of point sources which cause toxic impacts and the amounts of toxic pollutants they discharge; and individual control strategies for each such discharge.

Two of the required lists are identical to candidate lists prepared under contract for the U.S. Environmental Protection Agency (EPA) by the Research Triangle Institute (RTI). These preliminary lists are:

> The candidate "long list": A comprehensive list of waters impacted by point and nonpoint source discharges of toxic, conventional, and nonconventional pollutants. This list is required under Section 304(l)(A)(ii) of the CWA; and
>
> The candidate "mini list": A list of waters for which the State does not expect to achieve State water quality standards revised pursuant to Section 303(c)(2)(B) for Section 307(a) toxics after technology-based requirements have been met, due to either point or nonpoint sources of pollution. This list, required under Section 304(l)(a)(i), is a subset of the "long list".

This report presents and discusses a preliminary list of waters for which the State does not expect applicable numeric or narrative water quality standards for the 126 toxic pollutants listed in Section 307(a) of the

Clean Water Act. To be achieved after technology-based requirements have been met due entirely or substantially to point source discharges. These 126 toxic pollutants are known as the "priority pollutants" and are identified in Table 1. The list presented in this report, referred to hereafter as the "short list", is required under Section 304(l)(1)(B) of the Clean Water Act.

Development of the candidate short list. Under contract to EPA, RTI developed candidate lists to help the states in meeting Section 304(l) requirements. Candidate waterbodies for the short list were identified through the use of 16 screening categories developed by EPA (see Table 2). A reach was placed on the candidate short list if known or potential toxic pollutants were known or suspected to be present and a possible point source origin for these pollutants was present. Information used in developing the short list was obtained from Environmental Improvement Division (EID) staff, from EID reports, from EPA's NPDES files, and from ambient data contained in STORET. Additionally, the possibility of toxic pollutants in toxic amounts (suspected pollutants) was inferred through the results of computerized dilution analyses using a variety of EPA data bases and analytical tools. Some data used in these analyses are generalized, such as the use of national data for major industrial categories and estimates of Best Available Technology concentrations in effluents.

The candidate short list for New Mexico contains 18 entries; this list is shown in Table 3. Table 3 also identifies the pertinent screeing categories for each reach.

Table 1. Section 307(a) toxic pollutants.

Acenaphthene
Acrolein
Acrylonitrile
Aldrin/Dieldrin
Antimony and compounds*
Arsenic and compounds
Asbestos
Benzene
Benzidine
Beryllium and compounds
Cadmium and compounds
Carbon tetrachloride
Chlordane (technical mixture and metabolites)
Chlorinated benzenes (other than dichlorobenzenes)
Chroniated ethanes (including 1,2-dichloroethane, 1,1,1-trichloroethane, and hexachloroethane)
Chloroalkyl ethers (chloromethyl, chloroethyl, and mixed ethers)
Chlorinated naphthalene
Chlorinated phenols (other than those listed elsewhere: includes trichlorophenols and chlorinated cresols)
Chloroform
2-chlorophenol
Chromium and compounds
Copper and compounds
Cyanides
DDT and metabolites
Dichlorobenzenes (1,2-, 1,3-, and 1,4-dichlorobenzenes)
Dichlorobenzidine
Dichloroethylenes (1,1- and 1,2-dichloroethylene)
2,4-dichlorophenol
Dichloropropane and dichloropropene
2,4-dimethylphenol
Dinitrotoluene
Diphenylhydrazine
Endosulfan and metabolites
Endrin and metabolites
Ethylbenzene
Fluoranthene
Haloethers (other than those listed elsewhere: includes chlorophenylphenyl ethers, bromophynylphenyl ether, bis(dischloroisopropyl) ether, bis-(chloroethoxy) methane and polychlorinated diphenyl ethers)
Halomethanes (other than those listed elsewhere: includes methylene chlorid methylchloride, methylbromide, bromoform, dichlorobromomethane, trichlorofluoromethane, dichlorodifluoromethane)
Heptachlor and metabolites
Hexachlorobutadiene
Hexachlorocyclohexane (all isomers)
Hexachlorocyclopentadiene
Isophorone
Lead and compounds
Mercury and compounds
Naphthalene
Nickel and compounds
Nitrobenzene
Nitrophenols (including 2,4-dinitrophenol) dinitrocresol)
Nitrosamines
Pentachlorophenol
Phenol
Phthalate esters
Polychlorinated biphenyls (PCSs)
Polynuclear aromatic hydrocarbons (including benzanthracenes, benzopyrenes, benzofluoranthene, chrysenes, dibenzanthracenes, and indenopyrenes)
Selenium and compounds
Silver and compounds
2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCCDD)
Tetrachloroethylene
Thallium and compounds
Toluene
Toxaphene
Trichloroethylene
Vinyl chloride
Zinc and compounds

*The term "compounds" includes organic and inorganic compounds.

Table 2. Screening categories for 304(l) lists.

1. Waters where fishing or shellfishing bans and/or advisories are currently in effect or are anticipated.

2. Waters where there have been repeated fish kills or where abnormalities (cancers, lesions, tumors, etc.) have been observed in fish and other aquatic life during the last 10 years.

3. Waters where there are restrictions on water sports or recreational contact.

4. Waters identified by the States in the 1982, 1984, 1986 or draft 1988 §305(b) reports as either "partially achieving" or "not achieving" designated uses.

5. Waters identified by the States and reported to EPA in the 3rd quarter of FY87 as waters needing water quality-based control for "toxics" and "nontoxics." (See FY87 Office of Water Accountability System Measure WQ-32.)

6. Waters identified by the States as priority waterbodies in FY86 because of impaired or threatened uses. State Water Quality Management plans include priority waterbody lists which are those waters that most need water pollution control decisions to achieve water quality goals.

7. Waters where ambient data indicate the presence of 307(a) toxic pollutants from primary industries.

8. Waters for which effluent toxicity test results indicate possible violations of State water quality standards, including narrative "free-from" criteria or EPA criteria where State standards are not available.

9. Waters with primary industrial major dischargers where simple dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not available) for 307(a) toxic pollutants, ammonia, or chlorine. These dilution analyses could be based upon estimates of BAT levels from effluent guidelines development documents, NPDES permit application data (e.g., Form 2C), Discharge Monitoring Reports (DMRs), or other available information.

10. Waters with municipal major dischargers requiring pretreatment where simple dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not yet available) for §307(a) toxic pollutants, ammonia, or chlorine. These dilution analyses could be based upon data from NPDES permit applications (e.g., Form 2C), Discharge Monitoring Reports (DMRs), or other available information.

Table 2. (Continued).

11. Waters with known or suspected use impairments where dilution analyses indicate exceedances of State water quality standards (or EPA criteria where State standards are not available) for §307(a) toxic pollutants, ammonia, or chlorine. This category includes waters with facilities not included in the previous two categories such as municipal majors not required to have pretreatment, Federal majors, and minors having water quality pretreatment, Federal majors, and minors having water quality impacts. These dilution analyses could be based upon estimates of BAT levels from effluent guideline development documents, NPDES permit application data, Discharge Monitoring Reports (DMRs), or other available information.

12. Waters classified for uses that will not support the "fishable/swimmable" goal of the Clean Water Act.

13. Waters where ambient toxicity or adverse water quality conditions have been reported by local, State, EPA, or other Federal agencies, the private sector, public interest groups, or universities. These organizations and groups should be actively solicited for research they may be conducting or reporting. For example, State university researchers, USDA Extension Service, and the U.S. Fish and Wildlife Service are good sources of current field research and activities.

14. Waters identified as having impaired or threatened designated uses in the Clean Lakes Assessment conducted under §314 of the Clean Water Act.

15. Waters identified as impaired by nonpoint sources in the 1985 America's Clean Water: States' Nonpoint Source Assessment (Association of State and Interstate Water Quality Pollution Control Administrators (ASIWPCA)) and waters identified as impaired or threatened in the nonpoint source assessment under §319 of the Clean Water Act.

16. Surface waters impaired by pollutants from hazardous waste sites on the National Priority List prepared under §105(8)(A) of CERCLA.

Table 3. 304(1)(B) candidate short list

Waterbody ID	Reach	Waterbody Name	Screening Categories 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	13030202006	*A											*					
	14080104001	Animas R							*				*					
	13020204024	Canada del Ojo									*							
	13020205016	Canada Marcelina									*							
	14080106004	Chaco R											*					
	13020201009	Galisteo Cr											*					
	14080106026	Kim-Me-Ni-Oli Valley							*		*		*					
	13030202004	Lampbright Draw									*							
	15020006007	Puerco R							*		*		*					
	11080001009	Raton Cr											*					
RG 2-119	13020101027	Red River				*			*		*			*			*	
	13020203016	Rio Grande							*			*	*					
	13030102002	Rio Grande							*				*					
	13020204008	Rio Puerco									*							
	13020204015	Rio Puerco											*					
RG 2-107	13020207012	Rio San Jose				*			*	*	*		*				*	
	13020204023	Salado Cr							*		*							
	14080105016	San Juan R							*				*					

SOURCE: Center for Environmental Systems, Research Triangle Institute. March 1988. State of New Mexico Identification of 304(1) waterbodies: Candidate Lists. Research Triangle Park, North Carolina.

Development of the State preliminary short list. To review the reaches on the candidate short list, EID first listed all point sources on these reaches identified in the RTI report. This list was corrected for each reach and additional point sources were identified by EID. Unless there was evidence to the contrary, minor municipal and domestic discharges were assumed to be free of toxic discharges. Information on the remaining discharges was obtained primarily from EID's NPDES files. The resulting list is preliminary because ambient data from STORET and data for pretreatment programs have not yet been examined.

This preliminary review and revision of the candidate short list has reduced the State's preliminary short list to 12 reaches; these reaches are identified in Table 4. All of these reaches may be eliminated after further review.

The rationale for the derivation of the State's preliminary short list is discussed below. For each reach on the candidate short list, the status of all point sources is identified. In two cases where point source discharges were misassigned to a reach, new reaches have been added. The basis for removal or retention of each reach on the State's preliminary short list is also discussed.

Table 4. Preliminary short list of reaches impacted by priority pollutants from point source discharges.

Hydrologic unit	Stream segment	Reach	Basis for inclusion
13030202006	2-803	A* (Whitewater Creek and tributaries)	Possible toxic discharges
14080104001	2-403	Animas River	Ambient data
14080106026	Unclassified	Kim-Me-Ni-Oli Valley	Ambient data
15020006007	Unclassified	Puerco River from its headwaters to Bread Springs Wash below Gallup	Ambient data
11080001012	2-306	York Canyon Creek	Possible ambient data
13020101027	2-119 and 2-120	Red River from Cabresto Creek to the Rio Grande	Ambient data, Daily Monitoring Reports
13020203016	2-105	Rio Grande from Jemez River confluence to Isleta Pueblo boundary	Ambient data, possible toxic discharges
13030102002	2-101	Rio Grande from below Las Cruces to the Texas border	Ambient data
13020207012	2-107	Rio San Jose from Bluewater Creek to Rinconada Creek	Ambient data, Discharge Monitoring Reports
13020205013	Unclassified	Arroyo Chico and tributaries	Ambient data
13020204023	Unclassified	Salado Creek	Ambient data
14080105016	2-401	San Juan River between Westwater Arroyo and Coolidge Arroyo	Ambient data

Hydrologic unit	Stream segment	Reach	Short list status
13030202006	2-803	*A (Whitewater Creek and tributaries)	Retained

Two point source discharges to these reaches are identified in the RTI report. No 307(a) toxics have been detected from ambient data. These reaches are included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The NPDES permit for the first indentified point source, the Village of Bayard, has been discontinued. Bayard now has only a collection system for municipal sewage and pipes raw sewage to the Kennecott operation on Lampbright Draw (hydrologic unit 13030202004). The American Smelting operation, the second identified point source, is currently shut down and is not discharging.

EID has identified another point source, Phelps-Dodge's (formerly Kennecott Copper's) Chino Mine, with an NPDES permit for discharge of process wastewaters from leaching operations to both Whitewater Creek and Lampbright Draw. The permit specifies no discharge except following 10-year, 24-hour storm events. The operation on Whitewater Creek discharged in violation of permit requirements during August 1987. No samples were collected following this discharge. Two distinct discharges during a rain event on July 11 and 12, 1988 are being investigated. Field testing following the July 11 discharge of 2 million gallons of mixed rainwater and process water recorded pH values of 3.4 and 3.65. Conductivity was

measured at 6,400 umhos/cm and 5,600 umhos/cm. The NM Health and Environment Department's Scientific Laboratory Division will analyze samples for general water chemistry and heavy metals.

Whitewater Creek is retained on the preliminary short list pending examination of the data for the Chino discharge. Although there is no indication of toxic pollutants in Whitewater Creek from ambient data available to RTI, this reach is known to be heavily impacted from old mining point and nonpoint sources. The contribution of toxics from old sources to the impacts is not known, nor is the contribution of the discharges of process water from the Chino Mine. In order to document the Chino discharge contribution, EID recommends that EPA include stricter record-keeping and rain-monitoring requirements in the NPDES permit requirements for the Chino Mine outfall to Whitewater Creek (Outfall 001), as well as monitoring requirements for general water chemistry and heavy metals during permitted and unpermitted discharges.

Hydrologic unit	Stream segment	Reach	Short list status
14080104001	**2-403**	**Animas River**	**Retained**

One point source to this reach, the City of Aztec, is identified in the RTI report. The reach is included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxics as well as on the basis of computerized dilution analyses which indicate possible exceedances of State water quality standards or EPA criteria for 307(a) toxics.

Section 307(a) toxics are not expected to be associated with the discharge from the Aztec treatment plant. The computerized dilution analysis indicating suspected toxics is based on chlorine concentrations; chlorine is not a 307(a) toxic.

EID has identified three other point sources with NPDES permits located on the Animas River in New Mexico. The Farmington Municipal Operation (ground water clean-up) has not yet discharged. The Farmington Sand and Gravel Co. has not discharged since at least 1982. The third discharge is Farmington's Animas Steam Plant; toxics are not expected to be associated with this discharge.

Although 307(a) toxics are not expected to be associated with the point sources located on the Animas River, this stream is retained on the preliminary short list pending examination of ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13020204024	**2-106**	**Canada del Ojo**	**Removed**

One point source discharge to this reach, Uranium King Corp.'s Rio Puerco Mine, is identified in the RTI report. No 307(a) toxics have been detected in this reach from ambient data. This reach, a tributary of the Rio Puerco, is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The Rio Pureco Mine has not discharged since 1980, when it was placed on standby status.

Canada del Ojo is removed from the preliminary short list because there are no active point source discharges to this ephemeral reach and there is no indication of toxic pollutants from ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13020205016	2-106	Canada Marcelina	Removed

One point source discharge, Continental Oil Co.'s Crownpoint Uranium operation, is identified in the RTI report as discharging to this reach. No 307(a) toxics have been detected in this reach from ambient data. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

Start-up was never initiated at the Crownpoint operation, and its NPDES permit has been discontinued.

Canada Marcelina is removed from the preliminary short list because there are no point source discharges to this reach.

Hydrologic unit	Stream segment	Reach	Short list status
14080106004	2-401	Chaco River between Chinle Wash and Cottonwood Arroyo	Removed

One point source discharge to this reach, Utah International's Navajo Mine, is identified in the RTI report. No 307(a) toxics have been detected in this reach from ambient data. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The Navajo Mine has been in zero discharge status since the mine opened in 1977 and intends to remain in this status during the life of the mine.

EID has identified another point source, Arizona Public Service's Four Corners steam electric plant, with an active NPDES permit for discharge of process water to this reach. This facility recycles its process water and rarely discharges. It is in compliance with its NPDES permit. Arizona Public Service conducted two biomonitoring tests in May 1988. The results of these tests are not yet available.

This reach of the Chaco River is removed from the preliminary short list because there is no indication of toxic impacts from point source discharges.

Hydrologic unit	Stream segment	Reach	Short list status
13020201009	2-118	Galisteo Creek and tributaries	Removed

One point source discharge to these reaches, Gold Fields' Ortiz Mine, is identified in the RTI report. No 307(a) toxics have been detected in these reaches from ambient data. The reaches are included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The permitted discharge from this surface mine and leach operation is to Las Norias Gulch, a tributary to Galisteo Creek. This operation is in the process of closing. The NPDES permit covers discharge of ground water from three interceptor wells; the purpose of these wells is to produce a cone of depression upflow from the open pit and thus prevent ground water from filling the pit. Water pumped from the interceptor wells was used as process water; only the excess was discharged. The operation has rarely discharged, and is in compliance with its NPDES permit requirements.

Galisteo Creek and its tributaries are removed from the preliminary short list because 307(a) toxics are not expected to be associated with the discharge from the interceptor wells, and there is no indication of toxic pollutants from ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
14080106026	Unclassified	Kim-Me-Ni-Oli Valley	Retained

These reaches are tributary to the Chaco River in stream segment 2-401. Seven point source discharges to reaches in Kim-Me-Ni-Oli Valley are identified in the RTI report. The reaches are included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxics as well as on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

Five of the point sources identified are uranium mines which have ceased operation; NPDES permits have been discontinued for these mines. These five are Phillips Petroleum Co.'s Nose Rock Mine, Conoco's Borrego Pass Mine, Phillips Uranium's Nose Rock operations (two mines), and United Nuclear Corp.'s Dalton Pass Mine. The other two discharges, the U.S. Bureau of Indian Affairs' Lake Valley Boarding School and the Navajo Tribal Utility Authority's Crownpoint facility, are classified as a minor domestic and a minor municipal, respectively.

Although 307(a) toxics are not expected to be associated with the two active discharges of domestic wastewater, the reaches in Kim-Me-Ni-Oli Valley are retained on the preliminary short list pending examination of the ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13030202004	2-803	Lampbright Draw	Removed

One point source discharge to this reach is identified in the RTI report. No 307(a) toxics have been detected in this reach from ambient data. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxic pollutants.

The identified point source, Kennecott Copper's Chino Mine, has two separate discharge points, one to Lampbright Draw and the other to Whitewater Creek in hydrologic unit 13030202006.

Kennecott Copper's NPDES permit is for the discharge of process wastewater from leaching operations. Raw sewage from the Village of Bayard is collected along with the process water in lagoons, where they receive primary treatment and are then placed in tailings piles. The permit specifies no discharge except following storm events, either rainfall or snowmelt, and 307(a) toxics are not expected to be discharged.

Lampbright Draw is removed from the short list because Section 307(a) toxics are not expected to be associated with the discharge and there is no indication of toxic pollutants from ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
1502006007	Unclassified	Puerco River from its headwaters to Bread Springs Wash below Gallup	Retained

Fourteen point source discharges to this reach are identified in the RTI report. The reach is included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxic pollutants as well as on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

Of the fourteen point sources identified by RTI, three were never issued NPDES permits, indicating decisions not to discharge. These three are Yah-Ta-Hey Water & Sanitation District, Navajo Training Center, and Michael P. Grace at Milan.

The NPDES permits for five of the fourteen point sources identified by RTI have been discontinued. The permit for the U.S. Army Fort Wingate Depot was discontinued in May 1987. Those for Kerr-McGee Churchrock II and Churchrock III mines were discontinued in November 1980. The permit for Gallup Gamerco Coal Co. was discontinued in October 1982, and for the Navajo Training Center, in April 1987.

The City of Gallup is a major municipal discharger, and is not expected to discharge 307(a) toxics.

United Nuclear Corporation's Churchrock and Old Churchrock Mines are on standby status and have not discharged since 1983. Quivira's Churchrock facility is also on standby status and has not discharged since February 1986. The results of ten biomonitoring tests conducted on the discharges

from Quivira's Ambrosia Lake mining operations were used in the NPDES permit renewal process for Quivira's Churchrock operation. In all ten tests there was a 100 percent survival rate of Daphne species, indicating that there are no 307(a) toxics being discharged. On the assumption that the Churchrock discharges will be similar to the Ambrosia Lake discharges, these tests provide the basis for NPDES permit requirements for the Quivira Churchrock operations.

Indian Hills Mobile Home Park and Fort Wingate Schools are domestic dischargers, and are not expected to discharge 307(a) toxics.

This reach of the Puerco River is retained on the preliminary short list pending examination of the ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
11080001009	2-306	Raton Creek	Removed

Three point source discharges to Raton Creek are identified in the RTI report. No Section 307(a) toxics have been detected in this stream from ambient data. Raton Creek is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for Section 307(a) toxics.

One of the identified point sources, Kaiser's York Canyon Mine, does not discharge to Raton Creek. This coal mine has a permitted discharge to the

stream in York Canyon, a tributary to the Vermejo River, in hydrologic unit 11080001012. The other two discharges are from the City of Raton's wastewater treatment plant, classified as a major municipal, and from the Raton Public Service Co. electric plant.

Raton Creek is removed from the short list because Section 307(a) toxics are not expected to be associated with either of the two point source discharges. There is no indication of toxic pollutants from ambient data. The indication of potential pollutants from dilution analyses are probably due to data for the Kaiser Mine discharge. Consequently, the York Canyon drainage, receiving water for this discharge, has been added to the candidate short list.

Hydrologic unit	Stream segment	Reach	Short list status
11080001012	**2-306**	**York Canyon Creek**	**Retained**

EID has identified two point sources to this reach, Kaiser Coal Co.'s Cimarron Mine and York Canyon #1 Mine. The Cimarron Mine is presently not operational. The York Canyon Mine discharges infrequently.

Although 307(a) toxics do not appear to be associated with these discharges, York Canyon Creek is retained on the preliminary short list pending examination of ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13020101027	2-119 and 2-120	Red River from Cabresto Creek to the Rio Grande	Retained

Two point source discharges to this reach are identified in the RTI report. The reach is included on the candidate short list on the basis of waters identified by the State as either partially achieving or not achieving designated uses, of waters where ambient data indicate the presence of 307(a) toxic pollutants, and of waters classified for uses that will not support the "fishable/swimmable" goals of the Clean Water Act. In addition, computerized dilution analyses indicate exceedances of State water quality standards or EPA criteria for 307(a) toxic pollutants.

One of the identified point sources, the Village of Red River's wastewater treatment plant, actually discharges to a different (upstream) reach of the Red River, identified as hydrologic unit 13020101028. Since Red River is a minor municipal discharger, it is not expected to discharge 307(a) toxics.

The second identified point source, Molycorp's molybdenum mine near Questa, has permitted discharges to two different stream segments on the Red River. The outfall which discharges process water from milling operations and tailings disposal lies in stream segment 2-119, and has not discharged since February 1986 when mining operations were placed on standby status. The second outfall, which discharges seepage from tailing impoundment, lies in stream segment 2-120, and is currently discharging.

Discharge Monitoring Reports by Molycorp indicate exceedances of EPA chronic criteria for several heavy metals. In accordance with NPDES permit renewal requirements, Molycorp is to perform biomonitoring tests on effluent from the tailings seepage impoundment. The biomonitoring tests are to be initiated within 60 days of the effective date of the permit (June 21, 1988). In addition, within 60 days after mill startup, Molycorp is required to perform quarterly biomonitoring of the combined effluent discharges for a period of one year. Such testing will assist in evaluating wastewater toxicity, and data will be analyzed by EID as they are reported by Molycorp.

Additional water quality data will be gathered in September 1988 through an intensive survey conducted by EID. EPA will conduct instream biomonitoring in conjunction with the survey. In addition, the U.S. Geological Survey will conduct a seepage study from above the Town of Red River to the USGS gauge (08265000) at the Questa Ranger Station.

The Red River reach is retained on the short list pending examination of the ambient data, of the effluent biomonitoring results, and of the conclusions of the water quality surveys.

Hydrologic unit	Stream segment	Reach	Short list status
13030203016	2-105	Rio Grande from Jemez River confluence to Isleta Pueblo boundary	Retained

Five point sources located on this reach are identified in the RTI report. This reach is included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxics and on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The NPDES permit for the Hydro Nuclear Corporation was never issued, indicating a decision not to discharge. Charles Caruso in Alameda has ceased discharging, and this NPDES permit has been terminated. Albuquerque Utilities in Rio Rancho (NM0027987), a domestic discharge, and the Town of Bernalillo, a minor municipal, are assumed to be free of toxic constituents. The City of Albuquerque's waste water treatment plant is a major municipal with a pretreatment program. Albuquerque is in compliance with its NPDES permit; the pretreatment program has not yet been reviewed by EID.

EID had identified eight additional point sources with active NPDES permits located on this reach. The Sandia Peak Ski Basin is a domestic discharge, and is assumed free of toxic constituents. A second Albuquerque Utilities wastewater treatment plant (NM0029602) is not yet discharging. Both PNM's Person Generating Station and Reeves Generating Station, along with the Atchison, Topeka and Santa Fe railroad yard, are in compliance with NPDES permit requirements; there is no evidence from NPDES files that these discharges contain 307(a) toxics. The Roberts Oil Co. discharge is from a gasoline contamination clean-up site. Contaminated water will be air-

stripped, and the water discharged after contaminants have been removed. Discharge from this site has not yet been implemented; Roberts Oil intends to begin discharge in the near future.

The Siemens Transmission Systems operation is now solely an electronic components assembly facility; manufacture of crystal filters at this plant has ceased. Siemens is in compliance with its NPDES permit limitations. The NPDES permit requires monitoring for appropriate priority pollutants. Siemens has determined that these consist of 1,1,1-trichloroethane and lead. Routine monitoring for lead indicate possible exceedances of the EPA chronic criterion for aquatic life. The lead criterion is hardness dependent, and additional data will be necessary to determine the impact of lead concentrations from this source.

The General Electric aircraft engines facility is part of the San Jose Superfund site. Discharges from this facility consist of stormwater and parking lot runoff. In May 1987, EPA performed a bioassay test on the discharge from one of these outfalls; this sample was held for twelve days before submittal to the testing laboratory, thus invalidating the results. Data from a report prepared for GE by a consulting firm in January 1988 indicate exceedances of EPA criteria for several heavy metals. These criteria are hardness dependent; accordingly, EID determined appropriate criteria based on the hardness at the U.S. Geological Survey station on the Rio Grande near Isleta (08331000). These criteria and the discharge concentrations are shown in Table 5.

Table 5. Selected concentrations of heavy metals in runoff from the General Electrict aircraft engines facility, Albuquerque.

Station[a/]	Hardness[b/]	Cadmium		Copper	Lead	Nickel	Zinc
		4-day avg. (chronic)	1-hour avg. (acute)	1-hour avg. (acute)	4-day avg. (chronic)	4-day avg. (chronic)	1-hour avg (acute)
	mg/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
		EPA aquatic life criteria					
	150.40	1.56	6.22	26.04	5.35	222.68	165.37
		Runoff concentrations					
8801181100 (Outfall 001)		3.00		30.00	20.0		650.0
880118115 (outfall 008)			25.0	60.00	23.0		330.0
8801181130 (outfall 024)					13.0		1,200.0
8801181145 (outfall 009)			20.0	80.0	15.0		340.0
8801181105 (outfall 001, QA-QC)			2.00	30.0	14.0		520.0
8801181200 (outfall 003)			4.00	140.0	13.0	350.0	1,200.0

a/All outfalls are stormwater discharge except outfall 024, which is parking lot runoff.

b/Average hardness, U.S. Geological Survey station 08331000, Rio Grande near Isleta, 1970-1988.

EID has not previously been aware of these contaminants in GE's discharge and requires more information in order to assess their importance. Consequently, EID recommends that EPA include weekly monitoring requirements for cadmium, copper, lead, nickel, zinc, and hardness from outfalls 001, 008, 024, 009, and 003. Sampling for these toxics should be scheduled for the first hour of the first significant rain each week. A significant rain is considered to be one where runoff reaches the San Jose Drain.

This reach of the Middle Rio Grande is retained on the preliminary short list pending examination of ambient data and review of Albuquerque's pretreatment program and further analysis of the possible toxic impacts from the General Electric and Siemens discharges.

Hydrologic unit	Stream segment	Reach	Short list status
13030102002	2-101	Rio Grande from below Las Cruces to the Texas border	Retained

One point source discharge to this reach is identified in the RTI report. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxic pollutants, and on the basis of ambient data which indicate the presence of 307(a) toxics.

The point source identified by RTI, the Sunland Park wastewater treatment plant (NM0028525), has been shut down and an Affidavit of No Discharge has been submitted.

EID has identified six additional point sources with NPDES permits to discharge to this reach. Sunland Park has shut down a second treatment plant (NM0028959); an Affidavit of No Discharge has also been submitted for this discharge. The City of Sunland Park has a new wastewater treatment plant (NM0029483) which is currently discharging to this reach. However, as a minor municipal discharge, 307(a) toxic pollutants are not expected to be discharged.

The Anthony Water & Sanitation District is another minor municipal discharge to this reach. The Gadsden Independent School District at

Anthony is a domestic discharger. Neither of these facilities is expected to discharge 307(a) toxics.

The Los Ranchos del Rio Subdivision at Sunland Park has been issued an NPDES permit as a domestic discharger. There has been no discharge to date, because housing construction in the subdivision has not started.

El Paso Electric Company - Anapra discharges cooling tower blowdown, treated sanitary wastewater, and low volume wastewater (reverse osmosis brine demineralizer water and evaporator blowdown) to this reach. There is no indication from NPDES files that 307(a) toxics are being discharged.

Although 307(a) toxics do not appear to be associated with the point sources identified above, this reach of the Rio Grande is retained on the preliminary short list pending examination of ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13020204008	2-105	Rio Puerco from Salado Creek to Canada del Ojo	Removed

One point discharge to this reach, Continental Oil's Bernabe project, is identified in the RTI report. No 307(a) toxics have been detected in this reach from ambient data. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for Section 307(a) toxics.

The Bernabe uranium project is shut down, and the NPDES permit for this discharge has been discontinued.

This reach of the Rio Puerco is removed from the preliminary short list because there are no active point source discharges.

Hydrologic unit	Stream segment	Reach	Short list status
13020204015	2-105	Rio Puerco from Arroyo Chijuilla to A* (Nacimiento Creek)	Removed

One point source discharge to this reach, the IBI Coal Company's La Ventana Mine, is identified in the RTI report. No 307(a) toxics have been detected from ambient data. The reach is included on the candidate short list on the basis of computerized dilution analyses which indicate possible exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The La Ventana Mine has never discharged and its NPDES permit has been discontinued.

This reach of the Rio Puerco is removed from the preliminary short list because there are no point source discharges.

Hydrologic unit	Stream segment	Reach	Short list status
13020207012	2-107	Rio San Jose from Bluewater Creek to Rinconada Creek	Retained

Six point source discharges to this reach are identified in the RTI report. The reach is included on the candidate short list on the basis of waters identified by the State as partially achieving or not achieving designated uses, of waters where ambient data indicate the presence of 307(a) toxics, and of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

The City of Grants discharge is classified as a major municipal discharge; no 307(a) toxics are expected from this discharge. The other five point sources are uranium mines. Of these, Ranchers Exploration and Development Corp.'s operation has shut down and its NPDES permit was discontinued in 1982. The United Nuclear-Homestake Mine has not discharged since 1986. Quivira Mining Corp.'s Lee Mine has not discharged since at least 1980. This mine is currently on standby status.

Chevron's Mount Taylor Mine is pumped to the Rio Puerco drainage (hydrologic unit 13020205013). This hydrologic unit has been added to the candidate short list and is discussed below.

Quivira's Ambrosia Lake uranium operations (Section 35-36 mines) discharge ion exchange process water to a dry arroyo, thence to Arroyo del Puerto and thence to San Mateo Creek. Some mine water is discharged to an overland drainage canal where it infiltrates the surface and serves to irrigate adjacent pastures. Discharge Monitoring Reports from 1986 through February 1988 show numerous concentrations of selenium which exceed the EPA criteria for livestock watering (0.05 mg/l) and irrigation (0.02 mg/l). These

levels ranged from 0.042 mg/l to 0.745 mg/l. Both irrigation and livestock and wildlife watering are attainable uses on these reaches.

This reach of the Rio San Jose is retained on the preliminary short list pending examination of ambient data and further examination of the impact of the effluent on attainable uses.

Hydrologic unit	Stream segment	Reach	Short list status
13020205013	Unclassified	Arroyo Chico and tributaries	Retained

These ephemeral reaches are tributary to the Rio Puerco in stream segment 2-105. EID has identified one point source, Chevron's Mount Taylor Mine, to Arroyo Chico. Although this point source is located in the Rio San Jose drainage, the discharges are pumped to the Puerco River drainage. Mine water and treated sanitary wastewater are discharged to a dry arroyo, and thence to San Miguel Creek, an ephemeral stream. San Miguel Creek is a tributary to Arroyo Chico, which in turn is tributary to the Rio Puerco.

Discharge Monitoring Reports for this facility indicate levels of selenium ranging from 0.079 mg/l to 0.315 mg/l in eight of the last ten months of sampling (July 1987 to April 1988). These levels exceed the EPA criteria for livestock watering (0.05 mg/l) and irrigation (0.02 mg/l). Livestock and wildlife watering and irrigation are both attainable uses for this reach. However, this discharge seeps into the ground within a short distance of the outfalls. In order to avoid dual permitting, selenium

requirements for these discharges are covered by the State ground water discharge plan, and the monitoring requirement for selenium has been eliminated from the NPDES permit.

Although toxic impacts from the discharge from Chevron's Mount Taylor Mine are not expected, Arroyo Chico is retained on the preliminary short list pending examination of ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
13020204023	Unclassified	Salado Creek	Retained

Salado Creek is tributary to the Rio Puerco in stream segment 2-105. One point source discharge to this reach, Quivira's Marquez Mine, is identified in the RTI report. The reach is included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxics as well as on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

Although Quivira's uranium mine at Marquez has an active NPDES permit, it has never discharged.

EID has identified another point source to this reach, Bokum's Marquez Mine. This mine is also covered by an active NPDES permit, but has not discharged since at least 1982.

Salado Creek is retained on the preliminary short list pending examination of ambient data.

Hydrologic unit	Stream segment	Reach	Short list status
14080105016	2-401	San Juan River between Westwater Arroyo and Coolidge Arroyo	Retained

Two point sources to this reach are identified in the RTI report. The reach is included on the candidate short list on the basis of ambient data which indicate the presence of 307(a) toxics as well as on the basis of computerized dilution analyses which indicate suspected exceedances of State water quality standards or EPA criteria for 307(a) toxics.

One of the identified point sources is Utah International's Navajo Mine. This mine discharges to Morgan Lake and thence to the Chaco River in hydrologic unit 14080106004, and is discussed under that stream reach. The other identified point source is the treatment facility at the U.S. Bureau of Indian Affairs Nenahnezad Boarding School; 307(a) toxics are not expected to be associated with this discharge.

EID has identified two additional point sources located on this reach of the San Juan. The Central Consolidated Schools at Kirtland discharge domestic wastewater; 307(a) toxics are not expected to be associated with this discharge.

The Harpers Valley subdivision at Kirtland discharges domestic wastewater from a package plant. Chemical effluent sampling of this discharge for 307(a) toxics in September 1987 by EID indicate the following concentrations for trihalomethanes:

Compound detected	**Conc. (ppb)**
trichloromethane (chloroform)	84
bromodichloromethane	12
dibromochloromethane	3
toluene	possible trace <1 ppb

detection limit = 1 ppb

The presence of these trihalomethanes in the sewage effluent is probably due to the interaction between decaying vegetation (trihalomethane precursors) and free chlorine. Trihalomethanes are potential human carcinogens; however, this reach of the San Juan is not designated for domestic water supply use. Although the sum of the concentrations exceeds the EPA fish consumption criterion for total halomethanes of 15.7 ug/l, this reach is not an important fishing stream. EPA has not promulgated a chronic criterion for aquatic life for these contaminants. The total concentration is far below the EPA acute criterion (lowest observed effect limit) for aquatic life of 11,000 ug/l. In addition, the total concentration is just below the 0.1 mg/l permitted by EID's Water Supply Section for water treatment plants. For these reasons, EID does not consider that these toxics are present in the stream reach in toxic amounts.

This reach is retained on the preliminary short list pending examination of ambient data.

Larry

New Mexico Health and Environment Department

CARLA L. MUTH
Secretary

MICHAEL J. BURKHART
Deputy Secretary

RICHARD MITZELFELT
Director

February 15, 1989

Mr. Russell Bowen, Chief
State Program Section (6W-QS)
Environmental Protection Agency
1445 Ross Avenue
Dallas, TX 87503

Dear Mr. Bowen:

I have been asked to respond to the December 23, 1988 letter from Mr. Champagne of your staff to Kathleen Sisneros, Chief of the Surface Water Quality Bureau, concerning the State's preliminary 304(l) lists. I apologize for the delay in responding to Mr. Champagne's letter, but I concluded that completing the 304(l) lists by the statutory February 4, 1989 deadline to be of a higher priority. As you know, the Division submitted the final version of these lists on February 1, 1989. Many of EPA's concerns were specifically addressed and discussed in the final document.

I have addressed EPA's concerns below on an item-by-item basis.

Item 1: No action was taken on this item as there were no waterbodies remaining on the final short list.

Item 2: Where ambient data show significant exceedances of State water quality standards or of EPA freshwater criteria the waterbody was kept on the appropriate list (mini, long, or both).

Item 3: We have reviewed all reaches in the preliminary submittal including a re-evaluation of the listed data sources. Following this review, the Division reaffirms its position on these reaches; there are no available data to indicate these discharges are receiving or discharging 307(a) pollutants. We have included greater detail on data used in the final lists.

Item 4: I have no scientific basis for producing a list of waterbodies "suspected" of water quality impairments due to toxics or any other pollutants; moreover, there are no statutory or regulatory reason for performing this exercise. I suggest that the waterbodies listed in Mr. David Tague's February 3, 1989 transmittal of the intensive surveys to be conducted under both the section 106 and 314 program for the upcoming year adequately document's our commitment to the toxics control program.

— ENVIRONMENTAL IMPROVEMENT DIVISION —
Harold Runnels Building
1190 St. Francis Dr.
Santa Fe, New Mexico 87503

Item 5: Results from the May through November 1988 studies conducted for Arizona Public Service (NPDES permit NM0000019) found no statistically significant difference in survival, reproductive success or growth of the fathead minnow in the tested effluent concentrations.

Item 6: No comment necessary.

Item 7: I find this comment somewhat puzzling in light of the "request" by the Permits Branch of the Water Management Division for EID review of potential exceedances of Gold Book criteria for parameters not covered in the State Regulations Governing Water Supplies (see item 9 below) and for reaches where these regulations do not apply. ThIS Division has repeatedly stated that we will propose adoption of appropriate criteria required by the statutory mandate of section 303(c)(2)(B) to the New Mexico Water Quality Control Commission.

Item 8: Every water identified by EPA had already been identified by the Division and appears in the proper 304(1) list.

Item 9: These dilution analyses had already been screened for potential inclusion in the 304(1) lists.

Item 10: I note that EPA apparently feels its eleventh hour "request" is sufficient reason for the Division to add additional point sources and/or stream reaches to a process which has, to date, required over one and one-half person years. If EPA had approached the Division earlier in the 304(1) process with this request, the additional review could have been systematically incorporated into ongoing programs. Moreover, the statement "The following RCRA facilities have NPDES permits and, therefore, discharge to surface waters..." is based on faulty assumptions. While a facility may have a NPDES permit the presence of that permit does not mean either that it is routinely allowed to discharge or even that it is active. For active facilities, the NPDES permit may not regulate or even recognize that toxics are discharged to receiving waters. I would suggest that your staff investigate the current status of the reported facilities and correctly identify your concerns. At least one of these permits is a "No Discharge" permit, one is a dairy farm and several are listed by our Hazardous Waste Bureau as exempt from RCRA. Where appropriate these facilities were reviewed for the final 304(1) lists.

Item 11: There is nothing contained in a "proposed rule" or in EPA "guidance" which binds the Division or the State of New Mexico to any course of action. Moreover, we will not accept judgment of the sufficiency of our efforts on such after-the-fact proposals and/or nonstatutory requirements. In the case of the two referenced "waterbodies" Santa Fe Lake does not receive point source discharges and in fact may not meet the criteria as a Water of the United States while Little Walnut Creek is an ephemeral stream for which no data are available within STORET and for which our Superfund staff have only limited water quality data.

Item 12: All available toxicity tests were reviewed. With the exception of the Las Vegas studies, which indicated significant toxicity due to total chlorine residual, all other tests yielded no significant results.

Item 13: This review had already been done.

Item 14: While the Division had been aware of the negative results of the Dioxin study in New Mexico, we are concerned about EPA's apparent insistence that this reach be added to a completed report at some time in the indefinite future ("...we will expect this waterbody to be added to the State's 304(1) lists.") The Clean Water Act required the Division to submit the final 304(1) lists by February 4, 1989. We will not be held responsible for information which was not available in time for suitable evaluation.

Item 15: All reaches crossing the various borders were reviewed for consistency although there is no statutory requirement for this review. All reaches which were identified by the various States had already been identified by the Division.

If you have additional questions feel free to call me at (505) 827-2828.

Sincerely,

Jim Piatt

Jim Piatt
Program Manager
Planning Section
Surface Water Quality Bureau

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 2 3 1988

Ms. Kathleen Sisneros, Chief
Surface Water Quality Bureau
New Mexico Environmental Improvement Division
Harold Runnels Bldg.
1190 St. Francis Dr.
Santa Fe, New Mexico 87503

Dear Ms. Sisneros:

As you know, Section 304(l) of the Clean Water Act, as amended, requires EPA to review and approve or disapprove the State-prepared lists of impaired waters, dischargers and amounts of priority pollutants, and individual control strategies (ICS). In the preparation of their lists and ICSs, States should use all existing and readily available sources of information. The list of categories described in Section III.C. of the March, 1988 final guidance for §304(l) may serve the Region as a principal basis for reviewing and approving or disapproving the State submittals. However, the Region will be relying most heavily on the Technical Agreements (TA) negotiated with each State. Some of these TAs have not been formally signed, but it is understood that the States have prepared their lists and ICSs according to the contents of the TA.

To help in the decision-making process, the Region has established a §304(l) Technical Review Committee (TRC) comprised of Region 6 personnel from Water Quality, Permits, Environmental Services, Enforcement, RCRA, and Superfund. The purpose of the TRC is to review the preliminary State submittals under §304(l) and provide comments to the States with recommendations for improvement to the lists and ICSs so that by the statutory due date of February 4, 1989, the final submittals will be as complete as possible. Comments from the TRC pertaining to your particular submittal are enclosed.

Please do not hesitate to contact me if you or your staff have any questions regarding these comments or other issues concerning §304(l).

Sincerely,

LC

Larry Champagne
304(l) Coordinator (6W-QS)

Enclosure

cc: Jim Piatt, NMEID
David Tague, NMEID

LC 12/20

CONCURRENCES

SYMBOL	6W-QS:LChampagne:5-7140:ch:11-21-88			LC-8600		
SURNAME	6W-QS Bowen	6W-QS Malott				
DATE	12/20	12/21				

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★U.S.GPO:1988-0-206-471

bcc: Bowen (6W-QS)
Vickery (6W-QT)
Ferguson (6W-P)
Stenger (6W-PM)
Pendergast (6W-PT)
Hartung (6W-E)
Holman (6E-SA)
State Coordinator (6W-QS)

DEC 2 3 1988

Ms. Kathleen Sisneros, Chief
Surface Water Quality Bureau
New Mexico Environmental Improvement Division
Harold Runnels Bldg.
1190 St. Francis Dr.
Santa Fe, New Mexico 87503

Dear Ms. Sisneros:

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To help in the decision-making process, the Region has established a §304(l) Technical Review Committee (TRC) comprised of Region 6 personnel from Water Quality, Permits, Environmental Services, Enforcement, RCRA, and Superfund. The purpose of the TRC is to review the preliminary State submittals under §304(l) and provide comments to the States with recommendations for improvement to the lists and ICSs so that by the statutory due date of February 4, 1989, the final submittals will be as complete as possible. Comments from the TRC pertaining to your particular submittal are enclosed.

Please do not hesitate to contact me if you or your staff have any questions regarding these comments or other issues concerning §304(l).

Sincerely,

Larry Champagne
304(l) Coordinator (6W-QS)

Enclosure

cc: Jim Piatt, NMEID
David Tague, NMEID

6W-QS:LChampagne:5-7140:ch:11-21-88 LC-8600
6W-QS
Bowen

bcc: Bowen (6W-QS)
Vickery (6W-QT)
Ferguson (6W-P)
Stenger (6W-PM)
Pendergast (6W-PT)
Hartung (6W-E)
Holman (6E-SA)
State Coordinator (6W-QS)

Region 6 Technical Review Committee Comments on
New Mexico's § 304(l) Submittal

304(l) Lists

The Technical Review Committee found EID's approach to list development to be very logical and well organized. EID utilized the RTI report containing the 16 categories of waters described in the 304(l) Guidance (March, 1988) and the proposed rule to prepare their "short" list. We approve of this methodology and would like to encourage EID to continue using RTI's report as a preliminary screening tool when preparing final "mini" and "long" lists. However, if EID does not evaluate data for any of these categories, then a specific rationale for doing so must be provided. We recommend that EID address the following comments during the development of final lists:

1) EID needs to submit a list of dischargers and the types and amounts of priority pollutants they are discharging for every facility associated with the waterbodies on the short list. To assist you in this endeavor, EPA contractors have developed a "sources and amounts" list which is enclosed for your review. This information should be used to help finalize your short list.

2) If a waterbody is deleted from the short list because no discharger is present or because the discharger identified has an expired permit, then EID should ensure that the waterbody is retained on the long list.

3) Several times on the State's preliminary short list submittal the assumption is made that municipal dischargers are not expected to discharge 307(a) toxics. For example, the City of Gallup on page 17 of the short list. We strongly recommend that EID review any effluent, DMR or in-stream data available on these municipal dischargers before making this assumption. EID should also provide a reference to the data used to delete the waterbody from the short list.

4) As stated in the Technical Agreement (TA) and to help demonstrate its commitment to an on-going toxics control program, the State should also submit a list of waterbodies "suspected" of having toxics problems. The methodology which will be used to confirm or deny this suspected toxicity (i.e., the Water Quality Assessment Plan) should accompany this submittal or may be included as an activity in EID's § 106 or 205(j)(l) workplans.

5) We expect EID to follow-up on evaluating biomonitoring data transmitted to the State by EPA and, if appropriate, add waterbodies to the short list. Stream segment 2-401 of the Chaco River on page 12-13 of the short list was removed before results from biomonitoring tests conducted in May 1988 were reviewed. This waterbody should be retained, at a minimum, on the suspect list until test results are reviewed.

6) We would like to remind EID that should they suspect a minor facility is discharging toxics, the Permits Branch of EPA will include, upon request from the State, biomonitoring requirements in the facility's permit.

7) Since the State is required to identify on the "mini list" waterbodies in which state-adopted numeric standards for 307(a) toxics are exceeded, only those waterbodies in which you have an exceedance of the numeric standards in New Mexico's "Regulations Governing Water Supplies" must be included on the "mini list". If the State chooses to include waterbodies on the "mini list" for exceedance of gold book criteria, we will expect the State to adopt numeric standards for those pollutants.

8) In order to help the Region identify waterbodies impacted by toxic pollutants our Environmental Services Division was asked to run a retreival of STORET data indicating exceedances of water quality criteria for priority pollutants. EPA's Gold Book criteria were used for assessments unless appropriate State standards were available. This data and the methodology used in the evaluation are enclosed. We strongly recommend that you consider this information in preparing final lists.

9) You should have previously received three (3) potential human health/water quality criteria exceedances (listed below) as identified by dilution calculations performed by EPA. These waterbodies should be evaluated for inclusion on the "short" or "suspect" list.

Stream name and segment	Facility	NPDES #	Pollutants
a) Rio Grande 2-101	City of Las Cruces	NM0023311	Chlorine Cyanide Copper Lead
b) San Juan 2-401	Bloomfield Refinery	NM0029751	Arsenic
c) Red River 2-119	Molycorp, Inc.	NM0022306	Cadmium Copper Lead

10) The following RCRA facilities have NPDES permits and therefore discharge to surface waters of the State:

Facility	NPDES #
a) Arizona Public Services Co.	NM0000019
b) Chino Mines Co. - Hurley	NM0020435
c) El Paso Electric	NM0000108
d) General Electric Co. - Albuquerque	NM0000159
e) Gold Fields Operating Co.	NM0028711
f) Homestake Mining Co.	NM0020389
g) Kaiser Steel Corp.	NM0000205
h) Molycorp Inc. - Questa	NM0022306
i) New Mexico State University	NM0025437
j) Public Service Co. - San Juan	NM0028606
k) Public Service of New Mexico	NM0000124
l) San Jaun Coal Co. - San Juan	NM0028746
m) U.S. Dept. of Energy - Los Alamos	NM0028576

Since all these facilities are generators/handlers of hazardous waste you should confer with your State RCRA staff to evaluate possible impacts on surface water. For information on hazardous waste codes for these facilities, see the enclosed RCRA information package.

11) The latest version of the proposed rule on § 304(l) was sent to EID by letter dated December 2, 1988. The definition of an ICS has been expanded to include decision statements under CERCLA. This means that any surface waters or sediments impacted by Superfund sites must be identified on the short list. The ICS for these waters would be the Record of Decision rendered under CERCLA. We would, therefore, expect to see the following waterbodies on the short list based on their association with Superfund sites:

    a) Santa Fe lake, a playa lake, located south of the AT + SF Railway switching yard in Clovis, New Mexico is the focus for the Atchison, Topeka and Santa Fe (AT + SF) Superfund site. Remedial Investigation sampling at the site found lake water to contain elevated amounts of arsenic, boron, chloride, fluoride, total phenolics, sulfate, total dissolved solids (TDS) and total organic carbon (TOC). Lake sediments show levels of boron, lead, chromium, hydrocarbons, total phenolics and TOC above expected levels.

    b) EPA's quarterly report for Superfund sites indicates Little Walnut Creek five miles downstream from the Cleveland Mill near Silver City, Grant County, New Mexico is highly acidic and possibly contaminated with lead, silver, zinc, copper, and arsenic.

12) You should have previously received toxicity tests results on five facilities which EPA evaluated since the toxicity screening program began in 1984. The facilities which have been screened are as follows:

NPDES #	Facility Name	Sample Collection Date
NM0000159	General Electric	5-21-87
NM0020737	Grants	11-26-85
NM0028100	Gulf Oil	4-10-84
NM0028355	USDE-LANL	3-10-86
NM0028827	Las Vegas	9-16-86
NM0028827	Las Vegas	12-29-87

EID should review this data and be sure that their 304(l) lists submittal is reflective of any impacts discovered. If you do not have toxicity tests data for any of these facilities, contact Phil Crocker at (214) 655-7145.

13) EID should review their preliminary 304(l) lists submittal for consistency with their NPS Assessment Report, Lake Water Quality Assessment Report, and their Section 305(b) Report.

14) There were apparently no contaminated waters identified in New Mexico by the National Dioxin Study. Two sites have been sampled in New Mexico under the National Bioaccumulation Study, a follow-up to the

National Dioxin study. Rio Mora near Terrero was sampled as a control site and no contamination was found here. EPA has not received results yet on the Pecos River site at Red Bluff, New Mexico. When we receive results we will transmit them to the State. If a problem is indicated here, we will expect this waterbody to be added to the State's 304(l) lists.

15) Enclosed are preliminary 304(l) submittals for Colorado, Utah, Arizona and Texas. EID should review this data for consistency on waterbodies which cross New Mexico's border. As we receive updated submittals from these States and a preliminary submittal from Oklahoma, we will transmit this information to you for evaluation.